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ABSTRACT

The questions of whether a number of equality and wealth neutrality measures agree, within the respective groups, when used to assess one state over time or to compare a number of states at one point in time are addressed. The basic analyses in this study show that for four assessments (equality in a state over time, wealth neutrality in a state over time, equality across states, and wealth neutrality across states), there is far from perfect agreement among the various measures and between units of analysis. But these findings result from a focus on a particular dependent variable, independent variable, pupil measure, two units of analysis, and a specific set of equality and wealth neutrality measures. The level of comparability for the variable limits the conclusions to measurement methodology and not to specific states. However, the selection of a subset of measures will make comparisons over time and across states more discriminating or less ambiguous. The critical question then becomes whether there is sufficient agreement on the value judgments so that specific measures and units of analysis can be selected. (PN)

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Paper No. 17

A METHODOLOGICAL ASSESSMENT OF EDUCATION EQUALITY AND WEALTH NEUTRALITY MEASURES

By

Robert Berne
with the assistance of
Leanna Stiefel

TM 830 211

A REPORT TO THE SCHOOL
FINANCE COOPERATIVE

July 1978

This research was carried out at the Public Policy Research Institute, Graduate School of Public Administration, New York University. Support was provided by the National Institute of Education, the Education Commission of the States, and the Ford Foundation. The opinions expressed in this report, however, are the authors' and should not be attributed to any of these groups. Mr. Chris Hakusa, Mr. Kim Olsen, and Ms. Mona Biblow provided excellent computer, research, and secretarial assistance, respectively, and their help is greatly appreciated.

"The Mexican Sierra has 17 plus 15 plus 9 spines in the dorsal fin. These can easily be counted. But if the sierra strikes hard on the line so that our hands are burned, if the fish sounds and nearly escapes and finally comes in over the rail, his colors pulsing and his tail beating the air, a whole new relational externality has come into being -- an entity which is more than the sum of the fish plus the fisherman. The only way to count the spines of the sierra unaffected by this second relational reality is to sit in a laboratory, open an evil smelling jar, remove a stiff colorless fish from the formalin solution, count the spines, and write the truth .... There you have recorded a reality which cannot be assailed -- probably the least important reality concerning either the fish or yourself.

It is good to know what you are doing. The man with his pickled fish has set down one truth and recorded in his experience many lies. The fish is not that color, that texture, that dead, nor does he smell that way." (John Steinbeck, "The Log from the Sea of Cortez," 1951, pp. 2-3).

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I. Introduction

The goal of educational equity is a much sought after one; yet the measurement of equity in education poses difficult questions. The purpose of this report is to perform a methodological assessment of certain types of equity measures, equality and wealth neutrality measures, so that the equity measurement process can be better understood. A relatively large number of equity measures have been suggested in the literature and utilized by school finance researchers and policy makers. The analyses to follow compare a number of these measures to determine whether the conceptual differences among the measures can be documented empirically. More specifically, questions such as the following are addressed:

1. When a number of equality measures are used to determine whether a state has become more or less equal between two points in time, do the measures agree?

2. When a number of wealth neutrality measures are used to determine whether a state has become more or less wealth neutral between two points in time, do the measures agree?

3. When a number of equality measures are used to rank a set of states from more to less equal at one point in time, do the rankings from the different equality measures agree?

4. When a number of wealth neutrality measures are used to rank a set of states from more to less wealth neutral at one point in time, do the rankings from the different wealth neutrality measures agree?

By answering these questions, hopefully this report will encourage methodologically sound equity evaluation.

Although this report has been put together by a small group of researchers, the report's conception and the data base utilized throughout represent the cooperation of many individuals and groups. In November, 1977 the Ford Foundation and the National Institute of Education jointly sponsored a meeting of researchers and policy analysts to discuss and determine the feasibility of measuring and comparing the equity of school finance systems over time and cross-sectionally among states. At this meeting a number of issues were raised and debated; one task that was decided upon was an empirical analysis of a range of equity measures and this report represents that analysis.

The group that met in Chicago, referred to alternatively as the "School Finance Cooperative" or the "NIE/Ford Conference in Equity Monitoring," recognized that certain choices needed to be made before the analysis could be carried out, so that a manageable project could be defined. With this goal in mind, at the meeting and through subsequent communications, decisions were made regarding various procedures and definitions to be utilized in the project. An example of the communications is included in this report in Appendix A.

Once the definitional criteria were agreed upon (not always unanimously), attention was turned to the construction of a data base. Various participants at the November meeting have been actively engaged in research in numerous states and a number of groups agreed to contribute the data utilized in this report. The states and years for which data were assembled along with the contributing group, are displayed in Table I-1; a complete list of participants at the November meeting is listed in Table I-2. The actual data submitted for the report are detailed in Appendix B.

The remainder of this report is divided into six sections and three appendices. Section II contains the definitions utilized in this report and, for each definition, an assessment of the comparability of the data. Discussed are the pupil measures, dependent (revenue) variable, independent (wealth)

TABLE I-1

29 STATE DATA BASE OF EQUALITY AND WEALTH NEUTRALITY MEASURES ASSEMBLED FOR THIS REPORT

STATE	YEARS	CONTRIBUTOR (See below for full description)
ALABAMA	72-73, 75-76	LC
CALIFORNIA	70-71, 71-72, 72-73, 73-74, 74-75	RAND
COLORADO	72-73, 74-75	ECS
CONNECTICUT	75-76	EPRI-ETS
FLORIDA	72-73, 73-74, 74-75, 75-76	GARMS-IDRA
GEORGIA	72-73, 75-76	LC-NCSL
ILLINOIS	72-73, 75-76	ILLINOIS STATE UNIV.
KANSAS	72-73, 74-75	NCSL
KENTUCKY	72-73, 75-76	ECS
LOUISIANA	72-73, 75-76	LC
MAINE	72-73, 75-76	NCSL
MARYLAND	76-77	LC-NCSL
MASSACHUSETTS	75-76	LC-NCSL
MICHIGAN	71-72, 72-73, 73-74, 74-75	RAND
MINNESOTA	71-72, 75-76	ECS
MISSISSIPPI	71-72, 75-76	LC
MISSOURI	74-75, 75-76	ECS
NEW HAMPSHIRE	75-76	EPRI-ETS
NEW JERSEY	74-75, 75-76, 76-77, 77-78	EPRI-ETS
NEW MEXICO	72-73, 73-74, 74-75, 75-76	GARMS-IDRA
NEW YORK	75-76	EPRI-ETS
NORTH CAROLINA	72-73, 75-76	LC
OREGON	75-76	ECS
SOUTH CAROLINA	72-73, 75-76	LC
SOUTH DAKOTA	73-74, 74-75, 75-76	ECS
TEXAS	74-75, 75-76	GARMS-IDRA
VERMONT	75-76	EPRI-ETS
WASHINGTON	70-71, 74-75	ECS
WEST VIRGINIA	75-76	LC-NCSL

CONTRIBUTORS

ECS	Education Commission of the States Education Finance Center Denver, Colorado (Mr. Allan Odden, Ms. Lora Rice)
EPRI/ETS	Education Policy Research Institute Educational Testing Service Princeton, New Jersey (Mr. Jay Moskowitz, Ms. Margaret Goertz)
GARMS/IDRA	Professor Walter Garms College of Education University of Rochester in cooperation with Intercultural Development Research Association San Antonio,Texas (Mr. Robert Brischetto)

ILLINOIS STATE UNIVERSITY	Center for the Study of Educational Finance Department of Educational Administration Illinois State University Normal, Illinois (Mr. G. Alan Hickrod, Mr. Ramesh Chaudhari)
LC	Lawyers Committee for Civil Rights Under Law Washington, D.C. (Mr. Joel Sherman, Ms. Pam Tomlinson)
NCSL	National Conference of State Legislatures Office of State-Federal Relations Washington, D.C. (Mr. William Wilken, Mr. Robert Edwards)
RAND	The Rand Corporation Santa Monica, California (Mr. Stephen Carroll)

TABLE I- 2

PARTICIPANTS IN NIE/FORD CONFERENCE ON EQUITY MONITORING, CHICAGO, ILLINOIS
NOVEMBER 22, 1977

Susan Abramowitz
National Institute of Education

John Augenblick
Education Commission of the States

Charles Benson
University of California, Berkeley

Robert Berne
Graduate School of Public Administration
New York University

Robert Brischetto
Trinity University

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Stephen Carroll
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Steve Chadima
Congressional Budget Office

Millicent Cox
The Rand Corporation

Christopher Cross
House Committee on Education and Labor

Denis Doyle
National Institute of Education

Robert Edwards
National Conference of State Legislatures
Office of State-Federal Relations

Iris Garfield
National Center for Educational Statistics
Office of Education

Walter Garms
Professor of Education
College of Education
University of Rochester

Dale Hickam
The Ford Foundation

Jack Jennings
House Committee on Education and Labor

James Kelly
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Roy Nhert
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Allan Odden
Education Finance Center
Education Commission of the States

Lora Rice
Education Commission of the States

Joel Sherman
Lawyers Committee for Civil Rights

Ed Truax
University of Rochester
College of Education

Walt Warfield
Center for the Study of Educational
Finance
Department of Educational Administration
Illinois State University

Lauren Weisberg
National Institute of Education

Bill Wilken
National Conference of State
Legislatures
Office of State-Federal Relations

variable, units of analysis, measures of equality and wealth neutrality, procedures for multiple district types, and preferred years for the analysis. At the end of Section II there is an evaluation of the types of analysis that should and should not be carried out, given the available data for this report.

Sections III and IV present the analysis of the equality and wealth neutrality measures when used in a state over time. Section III includes the assessment of the behavior of the measures used over time and Section IV is comprised of tables that document the changes in equality and wealth neutrality in 21 states where data are available over time. The equality and wealth neutrality measures are analyzed separately in Section III. For the equality and wealth neutrality measures the unweighted pupil and district units of analysis are assessed separately, then compared. The conclusions for the use of the equality measures over time are presented at the end of the first part of Section III and the conclusions for the wealth neutrality measures over time at the end of the second part of Section III. Basically, Sections III and IV address questions 1 and 2, listed earlier.

The analyses of the equality and wealth neutrality measures when used for interstate comparisons comprise Section V. The format is the same as Section III. The equality measures are analyzed first and conclusions for these measures are presented at the end of Part A in Section V; the wealth neutrality measures are assessed in Part B of Section V and the conclusions for the wealth neutrality measures are at the end of Section V. Thus, questions 3 and 4, from above, are dealt with in this section.

A limited range of sensitivity analyses are presented in Section VI. The weighted pupil unit of analysis is discussed and three examples are presented where the weighted pupil unit of analysis is compared to the unweighted pupil unit of analysis in states over time. Two alternative revenue variables are examined in the second part of Section VI and again comparisons are made in several states, over time, Section VI concludes with a discussion of the issues raised by the existence of large cities and multiple district types.

The conclusions from the report are presented in Section VII. The answers to the four questions listed above are summarized and certain unanswered questions are outlined.

Three appendices are included in a companion volume to this report. Appendix A is a copy of a communication among School Finance Cooperative members outlining the definitions that were to be used in assembling the data base for this report. Appendix B lists the basic data set by state and year and also includes the pupil, revenue, and wealth definitions utilized in each particular state. Appendix C recasts the data in Appendix B by years for each state and district type so that data for each state can be examined over time.

In a report as long as this one, there is a great temptation to look directly at the conclusions concerning the equality and wealth neutrality measures. There is really no problem in doing this but the reader is cautioned against jumpting directly to the data and making conclusions about individual states without carefully reading Section II, expecially Part H. It is worth repeating here, however, that this report is concerned primarily with the behavior of the measures, not comparisons among the states.

II. Data Definitions

In this section the data definitions utilized in this report are described. The definitions employed were agreed to at the initial meeting of the School Finance Cooperative in November 1977 that was discussed in the prior section. As such, the definitions were chosen as the result of a group decision process where multiple objectives came into play including intertemporal and interstate comparability, consistency with existing and available data, and managability in terms of the number of alternatives considered. Therefore, an exhaustive set of definitions is not included yet the agreed upon choices allow for an initial empirical investigation of a number of key equity and equality measurement issues.

The specific definitions of the variables utilized in this report for pupils, school resources, wealth, units of analysis, and equality and wealth neutrality measures are discussed below. Also, the years of analysis and methodologies for treating multiple district type states are reviewed. Time and space limitations preclude a detailed discourse on the advantages and disadvantages of each possible alternative for every measure. However, certain important alternatives to the selected definitions are outlined.[1] In addition, for each variable the degree to which the reported data conform to the preferred definitions is summarized.[2] Finally, this section concludes with an assessment of the types of comparisons that can be made with the data gathered for this report.

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[1] A copy of the memo to the School Finance Cooperative members that sets out the agreed upon definitions is reproduced as Appendix A.

[2] The actual definitions employed in each state are reported with the actual data by state-year in Appendix B.

A. Pupils

Throughout this report reference is made to pupils or variables that are computed on a per pupil basis. The preferred definition of pupil or synonymously, unweighted pupil, is average daily membership. The obvious alternative is an attendance based measure which is always lower than membership.

The actual definitions employed in each state are described in Appendix B.[3] Of the 29 states included in the report, 20 use a membership or enrollment based figure while 9 use an attendance based figure. However, as the actual definitions indicate, there is some variability in the way in which pupils are counted among states employing a membership definition. Yet, in all cases, an identical pupil measure is utilized in each state over time.

B. School Resources

In order to keep the data base and this report to a reasonable size, one school resource measure from among a number of alternatives is utilized. The resource variable used in this report is a revenue based measure that includes all revenues from state and local sources except revenues for capital projects and debt service are excluded where possible. Revenues for compensatory education programs, food service, adult education, community service, and transportation are included if feasible. Federal "impact" aid is excluded from local and state revenues unless state revenues are reduced by the amount of the impact aid. The revenue variable is for a school district and always reported on a per pupil (either unweighted or weighted) basis.

There are two major classes of resource measures that could have been employed, given available data. One is an expenditure based measure that is usually defined in terms of "current operating expenditures" and the other is a revenue based measure that includes different sets of local, state and/or federal revenues. Although many arguments could be presented for and against the various alternatives, it appears that a number of measures are "valid" but they measure different sub sets of resources. A complete enumeration of the characteristics of each alternative is not presented here, but one particular issue regarding the selected revenue measure, the inclusion of all state revenues including "categoricals", is discussed briefly.

---

[3] See item 1 or 1a, Pupils (unweighted), on the data tables in Appendix B for the specific definitions used in each state. It should be noted that the terms 'pupil' and 'unweighted pupil' are used interchangeably in this report. This is in contrast to the 'weighted pupil' count which is discussed in more detail below in Part D of this section under Unit of Analysis.

The basic issue is whether categorical state aid should be included in a revenue measure based on local and state revenues, particularly when the equality of revenues is in question.[4] An argument against their inclusion is that categoricals are often directed at specific needs and, therefore, in many cases the desired result of categorical aid may be to increase the inequality of revenues.

On the other side, there are a number of reasons to include categoricals in a measure of local and state revenues. First, certain categoricals are not need related in such a way that they are intended to increase the inequality of revenues. Categorical aid for municipal overburden and pensions are two examples. In other cases it is difficult to determine the purpose or intent of the categoricals.

Second, it is difficult to have confidence that categoricals are different from other revenues when spending decisions are made at the local level. The exclusion of categoricals from a revenue measure implies that these revenues are targeted to a specific group of pupils at the local level when this may not be the case.

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[4] A recent Office of Education report (E. O. Tron, Public School Finance Programs, 1975-76. Washington, D.C.: USDE, USGPO, 1976.) indicates that, in 1975-76, the $28.5 billion of state aid was comprised of approximately 83% general aid and 17% categorical aid.

A possible alternative methodology that could take special needs into account is to use a measure of "weighted" pupils instead of an unweighted pupil measure. If categoricals are targeted to certain groups of pupils and those pupils are weighted more heavily, then it could be argued that the weighted pupil measure should show equality of revenues because the revenue and pupil measures are commensurate. Although the data for most states in this report do not include weighted pupils, the states of Illinois, Florida and New Jersey do have such data. The impact of the use of weighted compared to unweighted pupils is analyzed using the data for these three states in Section VI, Part A.

All of the resource measures used in this report are revenue based measures that include local and state revenues. However, the actual revenue definitions do vary and there is no simple way of summarizing these.

One of the most difficult problems of consistency among the states is the treatment of revenues for debt service and capital. Conceptually, local and state revenues for debt service and capital should be excluded. Alternatively, all local and state revenue could be included with local and state revenue financed expenditures for debt service and capital subtracted from the local and state revenue total.

Local (state) revenues for debt service can be identified when a special levy (categorical grant) for debt service exists, however, for several states the reported data are not sufficiently detailed or documented to exactly determine the manner in which debt service is handled.[5]

The situation for capital is somewhat more complex since a large portion of capital is not financed from local and state revenues but by debt financing instead.[6] It appears that in no case are the proceeds (receipts) from bond issues included in the measures of local and state revenues. Furthermore, in most cases the local contribution and state aid for capital that accounts for the non-debt financed portion of capital expenditures are excluded from the revenue measure as desired. But there is not perfect consistency in the treatment of capital. It appears as though either debt service and/or capital revenues are included in the revenues for 6 of the 29 states.

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[5] In 1973-74, expenditures for debt service accounted for 2.8% of state and local revenues on a national basis. See Scott, G.J. and P.M. Dunn, Statistics of State School Systems 1973-74. Washington, D.C.: NCES, HEW, USGPO, 1976.

There are also differences among the states in the way in which items such as social security and pensions are treated. In most states employer social security and pension contributions are paid by the local school district and are, therefore, included in the revenue measures. However, there are some cases where employer social security and/or pension contributions are paid directly by the state to the federal government or state pension fund so that these payments do not appear as a revenue of the school district. If employer social security payments or pension contributions in a particular state can be thought of as an equal percentage of local and state revenues, then equality and wealth neutrality measures that are insensitive to equal percentage changes should be preferred for interstate comparisons. However, in some cases, for example when the proportion of salaries that exceeds the social security maximum varies across districts, an equal percentage assumption may only be an approximation.

It should be noted that in all cases (with one minor exception, Louisiana) the revenue measures used in a particular state are consistent over time. In addition, for several states alternative revenue measures were reported and a limited sensitivity analysis is performed in Section VI, Part B. However, for most of the states analyzed in Section VI, Part B, total capital expenditures including the debt financed portion are subtracted from total local and state revenues.

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[6] Capital expenditures in 1973-74 were $4.978 billion or 9.3% of total local and state revenues. However, roughly 73% of these capital expenditures were financed from borrowing receipts that are not included in the local-state revenue total. See Scott and Dunn (1976).

Finally, Federal Impact Aid is only explicitly mentioned in one revenue definition (New Mexico) where it is included. It is assumed that in all other states Federal Impact Aid is excluded.

C. Wealth

The preferred wealth variable utilized in this report is a measure of equalized full value of property. It is recognized that other wealth conceptions exist such as fiscal capacity, income, or income adjusted wealth but the more traditional measure is used in this methodological analysis for the reasons cited at the beginning of this section. The wealth variable is computed for a school district and always reported on a per pupil (either unweighted or weighted) basis.

A wealth variable of some form is available in all states except Alabama. However, the reported property wealth is not always equalized on a state-wide basis and when it is equalized state-wide it is not always equalized to full market value. In three states (Louisiana, Mississippi, and South Carolina) the property values are not equalized on a state-wide basis. That is, the data are reported in assessed value. In all other states some form of state-wide equalization is in effect although not always to a full market level. For a number of states the state-wide equalization percentage is available and reported in Appendix B while in other states this percentage is not documented. The existence of differential state-wide equalization percentages, both across states and over time, will certainly influence our selection of a wealth neutrality measure. Ideally, a wealth neutrality measure should not be sensitive to alternative state-wide equalization percentages. Unfortunately, no wealth neutrality measure can correct for the intrastate variability caused by a failure to equalize assessments on a state-wide basis.

D. Units of Analysis

The term unit of analysis is used to describe the way in which the district level data are combined to yield the equality or wealth neutrality measures. Two primary units of analysis, the district and unweighted pupil, are utilized in this report. A secondary unit of analysis, the weighted pupil, is examined on a more limited basis in Section VI, Part A.

1. District as the unit of analysis

The inputs for the calculations of the equality and wealth neutrality measures using the district as the unit of analysis are, for each district, revenues per unweighted pupil and wealth per unweighted pupil. For this unit of analysis each district is treated identically within each state. Therefore, the number of units in a state's distribution of revenues per pupil equals the number of districts in the state.

2. Unweighted Pupil as the unit of analysis

The inputs for the calculations of equality and wealth neutrality measures using the unweighted pupil as the unit of analysis are, for each district, revenues per unweighted pupil, wealth per unweighted pupil and the number of unweighted pupils in the district. For this set of calculations each unweighted pupil is treated identically in the measures. The number of units in a state's distribution of revenues per unweighted pupil equals the number of unweighted pupils in the state.[7]

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[7] Another way of viewing the unweighted pupil compared to the district as the unit of analysis is the following. When the unweighted pupil unit is employed the district averages for revenues and wealth per pupil are weighted by the number of unweighted pupils when the equality and wealth neutrality measures are computed. When the district is the unit of analysis the district averages for revenues and wealth per pupil are weighted by one - as if each district only has one pupil - when the equality and wealth neutrality measures are computed.

3. Weighted Pupil as the unit of analysis

This unit of analysis is the same as the unweighted pupil unit of analysis described above except now the weighted pupil count is used in place of the unweighted pupil count. Weighted pupil counts are utilized by certain states to reflect the state's recognition that some students may "need" more resources than others. Weighted student measures are only available for a limited number of states (Florida, Illinois, and New Jersey) and the data are such that measures computed on a weighted pupil basis can only be used for comparisons over time for the particular state rather than for interstate comparison. The inputs for the calculations of the equality and wealth neutrality measures using the weighted pupil as the unit of analysis are, for each district, revenues per weighted pupil, wealth per weighted pupil, and the number of weighted pupils in each district. For this unit of analysis the number of units in a state's distribution of revenues per weighted pupil is the number of weighted pupils in the state. Note that weighted pupils are used in the denominator of the district level revenue and wealth variables in addition to the "weighting" of each district by the number of weighted pupils in the computation of the equality and wealth neutrality measures.

E. Measures of Equality and Wealth Neutrality.

In this part the measures of equality and wealth neutrality that are analyzed in this report are described and a summary of certain characteristics of the measures is presented. An in depth presentation of the properties of each measure is not presented here, but the interested reader is referred elsewhere.[8]

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[8] See Berne, R.M., "Equity and Public Education: Conceptual Issues of Measurement", Public Policy Research Institute, Working Paper No. 4, Graduate School of Public Administration, New York University, N.Y., N.Y., October, 1977; and Berne, R.M. and L. Stiefel, "An Evaluation of the Federal Expenditure Disparity Measure," Draft Report to USOE, July, 1978.

It must be stressed that the "equity" measures presented here are far from an exhaustive set of representations of what observers and scholars of school finance have considered as equity. For example, many believe that equity in school finance requires considerable inequality of resources due to the special needs of certain sub-populations such as educationally disadvantaged, economically disadvantaged, minorities, city or rural residents, etc. Equality measures that take factors such as these into account are recognized to be valid but are not considered in this methodological analysis.[9] A second example of a type of equity measure that is not considered in this report is a measure that examines the relationship between school resources and tax rates. Finally, even within the classes of equity measures considered in this report, equality and wealth neutrality, there are measures that are not included. For example, equality measures based on specific utility functions or wealth neutrality measures based on a constant elasticity specification have not been considered. Equity measures incorporated value judgements and it is impossible to take all values into account. This limitation should be kept in mind when the actual measures are examined in the sections to follow.

The equality measures are described first followed by the wealth neutrality measures. Throughout this report both types of measures are used to rank distributions; that is the measures are used ordinally. The distributions may be for one state over time or for a number of states at one point in time.

1. Equality Measures

Stated very simply equality measures assess the dispersion (or equality) of distributions. In this case the distributions are of revenues per pupil.

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[9] For an example of this type of analysis see Brischetto, R. "The School Finance Reforms of the Seventies: Their Impact on Poor and Minority Students in Six States", Intercultural Development Research Association. San Antonio, Texas, 1978.

The actual definitions of the nine equality measures used in this report are presented first, followed by a summary of certain properties of the measures.

The following symbols are used in this sub-part:

N = number of districts in a distribution (state).

P_i = number of unweighted pupils in district i.

REV_i = revenues per unweighted pupil in district i.

μ_p = mean per pupil revenues in a distribution (state) calculated on an unweighted pupil basis.

$$\mu_p = \frac{\sum_{i=1}^{N} P_i \, REV_i}{\sum_{i=1}^{N} P_i}$$

The definitions presented below are formulated assuming the unit of analysis is the unweighted pupil. The definitions when the weighted pupils is the unit of analysis are similar except the revenue variable is expressed on a weighted pupil basis and the weighted pupils are used in place of unweighted pupils in the definitions. The definitions for the district unit of analysis can be derived by using the unweighted pupil formulations but now assuming that there is only one student in each district, that is $P_i = 1$ for all i.

a. Range (RANGE)[10]
The range is defined as the difference between the highest and lowest values of REV_i in the distribution.

b. Restricted Range (RES RANGE)
The restricted range is defined as the difference between the value of REV_i below which five percent of the pupils fall and the value of REV_i above which five percent of the pupils fall.

c. Federal Range Ration (FED R R)
The federal range ratio is defined as the restricted range divided by the value of REV_i below which five percent of the pupils fall.

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[10] The representations in parentheses following the name of the equality measures are used to identify the measure in subsequent tables in this report.

d. Relative Mean Deviation (REL MN DEV)
The relative mean deviation can be defined as follows:

$$\frac{\sum_{i=1}^{N} P_i \left| \mu_p - REV_i \right|}{\sum_{i=1}^{N} P_i \mu_p}$$

e. Permissible Variance (PERM VAR)
The permissible vairance can be defined as follows:

$$\frac{\sum_{i=1}^{J} P_i REV_i}{M \sum_{i=1}^{J} P_i}$$

where M is defined as the median level of REV_i and districts 1 through J are below the median value of REV_i. (Note that REV_i is the pupil based median when the pupil is the unit of analysis.) The permissible variance is, therefore, a ratio of the actual total revenues in districts below the median to the total revenues that would be required for all districts if they were spending at the median level.

f. Variance (VAR)
The variance is defined as follows:

$$\frac{\sum_{i=1}^{N} P_i (\mu_p - REV_i)^2}{\sum_{i-1}^{N} P_i}$$

g. Coefficient of Variation (COEF VAR)
The coefficient of variation is defined as the square root of the variance devided by the mean (μ_p).

h. Standard Deviation of Logarithms (STD DEV LGS)

The standard deviation of logarithms can be defined as follows:

$$\left(\frac{\sum_{i=1}^{N} P_i (Z - \log_e REV_i)^2}{\sum_{i=1}^{N} P_i} \right)^{1/2}$$

Where $Z = \dfrac{\sum_{i=1}^{N} P_i \log_e REV_i}{\sum_{i=1}^{N} P_i}$

and the natural logarithm is utilized.

i. Gini Coefficient (GINI)

The Gini coefficient can be defined as follows:

$$\frac{1}{2\left(\sum_{i=1}^{N} P_i\right)^2 \mu_p} \left(\sum_{i=1}^{N} \sum_{i=1}^{N} P_i P_j \left| REV_i - REV_j \right| \right)$$

Graphically, the Gini coefficient can be expressed as the ratio of the area between the Lorenz curve and the 45° line to the area below the 45° line.

The nine equality measures incorporate different value judgements and a list of these value judgements, posed as questions, appears in Table II-1. The answers to the value judgement questions for the nine equality measures appear in Figure II-1. Figure II-1 shows that the equality measures incorporate the value judgements differently and it has been demonstrated that potentially

TABLE II-1

A LISTING OF VALUE JUDGEMENTS FOR EQUALITY MEASURES

1. Are all units* (students, districts, etc) taken into account in the equality measure?

2. Does the equality measure always show an improvement when dollars** are transferred from one unit to another that is lower in the distribution and and both units are located on the same side of the mean?

3. Does the equality measure always show an improvement when dollars are transferred from one unit to another that is lower in the distribution and both units are located on the same side of the median?

4. Does the equality measure always show an improvement when dollars are transferred from one unit above the mean to another that is below the mean?

5. Does the equality measure always show an improvement when dollars are transferred from one unit above the median to another that is below the median?

6. Does the equality measure always show an improvement when a constant amount of dollars is added to each unit?

7. Does the equality measure always show increased inequality when the total dollars of each unit are increased by a proportional amount?

8. Does the equality measure record dollar changes at different levels of the distribution in the same way?

9. Is the mean level used as a basis of comparison?

10. Is the median level used as a basis of comparison?

11. Are all levels compared to one another as the basis of comparison?

*The term "unit" refers to the unit of observation. In most investigations of educational equality the unit is the school district. Districts may or may not be weighted on a student basis.

**It is assumed here that dollars (per pupil) is the argument of the equity function. The same questions could be asked with other arguments.

Source: Berne, 1977.

FIGURE II-1

ANSWERS TO VALUE JUDGMENT QUESTIONS FOR NINE EQUALITY MEASURES

	EQUALITY MEASURES								
VALUE JUDGMENTS	Range	Restricted Range	Federal Range Ratio	Relative Mean Deviation	McCloone Index Permissible Variance	Variance	Coefficient of Variation	Standard Deviation of Logarithms	Gini Coefficient
1. All units taken into account?	No	No	No	Yes	No	Yes	Yes	Yes	Yes
2. Improvement for transfers on one side of the mean?	No	No	No	No	No	Yes	Yes	Yes*	Yes
3. Improvement for transfers on one side of the median?	No	No	No	No	No	Yes	Yes	Yes*	Yes
4. Improvement for transfers that cross mean?	No	No	No	Yes	No	Yes	Yes	Yes	Yes
5. Improvement for transfers that cross median?	No	No	No	No	Yes	Yes	Yes	Yes	Yes
6. Sensitive to equal additions?	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes
7. Sensitive to equal percentage increase?	Yes	Yes	No	No	No	Yes	No	No	No
8. Changes at different levels recorded identically?	No	No	No	No	No	Yes	Yes.	No	No
9. Mean for comparison	No	No	No	Yes	No	Yes	Yes	Yes	No
10. Median for comparison?	No	No	No	No	Yes	No	No	No	No
11. All levels for comparison?	No	No	No	No	No	No	No	No	Yes

*Not always true for very high end of distribution.

Source: Berne, 1977.

the measures can yield contradictory rankings.[11] After this section, this report will assess the degree to which there are contradictions among the measures for actual school finance data.

2. Wealth Neutrality Measures

The wealth neutrality measures examined in this report are all designed to assess the observed relationship between revenues per pupil and wealth per pupil. A state's distribution of revenues per pupil are considered wealth neutral when there is no observed relationship between revenues per pupil and wealth per pupil. The actual definitions of the nine wealth neutrality measures used in this report are presented first followed by a summary of certain properties of the measures.

In addition to the symbols used in the last sub-part, the following symbols are used in the wealth neutrality definitions.

W_i = equalized assessed property value per unweighted pupil in district i.

$\bar{W}$ = mean equalized assessed property value per unweighted pupil calculated on an unweighted pupil basis.

$$\bar{W} = \frac{\sum_{i=1}^{N} P_i W_i}{\sum_{i=1}^{N} P_i}$$

All but one of the wealth neutrality measures are calculated using regression procedures. The symbols used in the following definitions are appropriate for the unweighted pupil unit of analysis. When the unweighted (weighted) pupil is the unit of analysis the number of observation in the regression equals the number of unweighted (weighted) pupils and the independent and dependent variables and their means are calculated on an unweighted (weighted) pupil basis. When the district is the unit of analysis the number of observations in the regressions is the number of districts and the independent and dependent variables are calculated on an unweighted pupil basis. In this case the variable means ($\overline{W}$) are calculated using the distribution of districts.

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[11] See Berne, 1977 and Berne and Stiefel, 1978 for a further elaboration of the value judgements and examples of the contradictory rankings.

a. Simple correlation (SIM CORR)
This measure is defined as the simple correlation calculated when REV_1 is the dependent variable and W_1 is the independent variable.

b. Slope from simple regression (SLOPE W)
This measure is defined as the slope coefficient (unstandardized) in a regression where REV_1 is the dependent variable and W_1 is the independent variable. In a regression, $REV = a + b_1 W$, the slope coefficient equals b_1.

c. Slope from regression using W and W^2 (SLOPE W2)
This measure is defined as the slope calculated from the estimated regression $REV = a + b_1 W + b_2 W^2$. The slope is calculated at the mean value of $\overline{W}$ and equals $b_1 + 2b_2 \overline{W}$.

d. Slope from regression using W W^2 and W^3 (SLOPE W3)
This measure is defined as the slope calculated from the estimated regression $REV = a + b_1 W + b_2 W^2 + b_3 W^3$. The slope is calculated at the mean value of W and equals $b_1 + 2b_2 \overline{W} + 3b_3 (\overline{W})^2$.

e. Estimated difference in revenues between two values of wealth (EXP DIF)
This measure is defined as the difference between two predicted values of REV where the prediction equation is $REV = a + b_1 W + b_2 W^2 + b_3 W^3$. The values for W are the mean ($\overline{W}$) plus and minus one standard deviation of W. (The standard deviation of W is represented as SDW). This measure can be represented as the following:

$$a + b_1 (\overline{W} + SDW) + b_2 (\overline{W} + SDW)^2 + b_3 (\overline{W} + SDW)^3$$

$$- (a + b_1 (\overline{W} - SDW) + b_2 (\overline{W} - SDW)^2 + b_3 (\overline{W} - SDW)^3$$

$$= 2b_1 (SDW) + 4b_2 (SDW)\overline{W} + b_3 (6SDW \cdot \overline{W} + 2(SDW^3)).$$

f. Bivariate Gini coefficient (HICK GINI)[12]
This measure is not a regression based measure but instead is analogous to (but not the same as) the Gini coefficient. In

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[12] The Bivariate Gini Coefficient described here is based on the work of Professor G. A. Hickrod and others at Illinois State University. The definition

order to calculate the bivariate Gini, all districts are placed in order of wealth per pupil, from lowest to highest. This ranking can then be used to calculate a percentage distribution of pupils in order of increasing wealth. Simultaneously, the percent of total revenues associated with the distribution of pupils by wealth can be calculated. Finally, for each pupil, the percent of wealth and percent of revenues can be plotted in a Lorenz-like curve and the bivariate Gini is the area between the curve and the 45° line divided by the area below the 45° line.

Hickrod et al. point out that in certain instances there may be problems of interpretation for the bivariate measure since the Lorenz-like curve can cross the 45° line.[13] In the preparation of the data for this report, most data providers were able to identify instances when the Lorenz-like curve crossed the 45° line and the value of the bivariate Gini is not reported in the data set in these instances.[14]

g. Elasticity based on slope from simple regression (ELAST W)

This elasticity measure is computed by multiplying the slope from the simple regression (SLOPE W) by mean wealth per pupil divided by mean revenues per pupil. (ELAST W = (SLOPE W) $\left(\frac{\bar{W}}{\mu_p}\right)$.)

h. Elasticity based on slope from regression using W and W^2 (ELAST W2)

This elasticity measure is computed by multiplying the slope from the regression using W and W^2 (SLOPE W2) by mean wealth per pupil divided by mean revenues per pupil (ELAST W2 = (SLOPE W2) $\left(\frac{\bar{W}}{\mu_p}\right)$.)

i. Elasticity based on slope from regression using W, W^2, and W^3. (ELAST W3)

This elasticity measure is computed by multiplying the slope from the regression using W, W^2, and W^3 (SLOPE W3) by mean wealth per pupil divided by mean revenues per pupil. (ELAST W3 = (SLOPE W3) $\left(\frac{\bar{W}}{\mu_p}\right)$.)

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reported here draws heavily on G.A. Hickrod, T. Wei-Chi Yung, B.C. Hubbard, and R. Chaudhari, "Measurable Objectives for School Finance Reform: A Further Evaluation of Illinois School Finance Reforms of 1973", Illinois State University, Normal, Illinois, April 1975, especially pages 10 to 22.

[13] Hickrod et al, 1975, pages 18 and 19.

[14] When the Lorenz-like curves cross the 45° line the bivariate Gini coefficients are recorded as 0.00000 in Appendices Band C.

The nine wealth neutrality measures incorporate different value judgements and a listing of these value judgements, posed as questions, appear in Table II-2. The answers to the value judgements for eight wealth neutrality measures appear in Figure II-2.[15]

As was the case with the equality measures, it has been shown that the different measures of wealth neutrality can yield contradictory rankings.[16] In the next several sections the degree to which these measures yield contradictory rankings in one state over time and among states is examined.

F. Years of Analysis

Since this report utilized data that are currently available, it was not possible to obtain data for the same years in all states. As specified in Appendix A, the preferred years for the analysis are 1972-73 and 1975-76. However, the summary of the data outlined in Table I-1 indicates that data from the preferred years were not available in all cases. Nevertheless, the available data are satisfactory for the methodological analysis carried out in this report. First, data are available for more than one year for almost all states so that the consistency of the measures over time can be assessed. Second, data are available for over half the states for 1975-76 so that the measures can be evaluated among states at one point in time.

G. District Types

For most states analyzed in this report, data are available for all districts in a single data set since the grades covered by all districts, usually K-12, are comparable. However, for three states, California, Illinois,

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[15] The bivariate Gini is excluded from this figure due to the ambiguity of interpretation discussed above.

[16] See Berne and Stiefel, 1978.

TABLE II-2

A LISTING OF VALUE JUDGEMENTS FOR WEALTH NEUTRALITY MEASURES

1. Are all pupils taken into account in the measure?
2. Does the measure always show an improvement when revenues are transferred (mean preserving) from a district to another with lower per pupil wealth and per pupil revenues?
3. Is the measure sensitive to equal additions to the dependent (revenue) variable?
4. Is the measure sensitive to equal percentage increases in the dependent (revenue) variable?
5. Is the measure sensitive to equal additions to the independent (wealth) variable?
6. Is the measure sensitive to equal percentage increases in the independent (wealth) variable?

Source: Berne and Stiefel, 1978.

FIGURE II-2

ANSWERS TO VALUE JUDGEMENT QUESTIONS
FOR EIGHT WEALTH NEUTRALITY MEASURES

(adopted from Berne and Stiefel, 1978)

	WEALTH NEUTRALITY MEASURES							
VALUE JUDGEMENTS	SIM CORR	SLOPE W	SLOPE W2	SLOPE W3	EXP DIE	ELAST W	ELAST W2	ELAST W3
1. All pupils taken into account?	YES	YES	YES	YES	YES	YES	YES	YES
2. Improvement for mean preserving transfers?	NOT NECESSARILY	YES	NOT NECESSARILY	NOT NECESSARILY	NOT NECESSARILY	YES	NOT NECESSARILY	NOT NECESSARILY
3. Sensitive to equal additions to dependent?	NO	NO	NO	NO	NO	YES	YES	YES
4. Sensitive to equal percentage increases in dependent?	NO	YES	YES	YES	YES	NO	NO	NO
5. Sensitive to equal additions to independent?	NO	NO	NO	NO	YES	YES	YES	YES
6. Sensitive to equal percentage increases in independent?	NO	YES	YES	YES	YES	NO	NO	NO

Source: Berne and Stiefel, 1978.

and Missouri, there are gorups of districts that cover different grade levels. The data in these states are organized by district type and they are reported and analyzed as such in this report.[17] Once the inequality and wealth neutrality measures are computed by district type it is impossible to combine these measures for an entire state in a valid and simple fashion. Since the researchers who made the data available respected the district type distinctions, a consistent procedure is followed in this report.

H. Conclusions and Caveats

Given the nature of the data gathered for this report, there are at least four ways in which these data can be analyzed. In each case there are certain caveats that must be reported with the analysis and in the last two cases the caveats may be so compelling that the analysis is invalid.

First the data can be utilized to assess the behavior of equality or wealth neutrality measures over time in a particular state. Conclusions that would follow from an analysis of this type relate to the measures. That is, the question asked is whether equality or wealth neutrality measures agree with one another when used in time series analysis. Since the revenue, wealth, and pupil definitions are highly comparable in each state over time, the data gathered for this report should yield meaningful conclusions about the potential for contradictions among the measures when intertemporal analyses are carried out.

Second, an analysis of the consistency of equality or wealth neutrality measures for a number of states at one point in time could be performed using the data gathered for this report. Again, this type of analysis focuses on the consistency among the measures. The primary concern in comparisons of the measures across states should be that each measure is computed for each state on the same distribution of variables. The differences in comparability of the definitions of revenues, wealth, and pupils should not influence the analysis so long as the basic properties of the distributions are not altered by the differences in comparability outlined in this section. Therefore, when the data in this report are utilized to compare the behavior of the measures across states, an implicit assumption is that the inconsistencies are caused by the differences in the measures and not by the differences in data comparability.

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[17] An exception is Missouri where data for the unit districts are used in interstate comparisons since 98% of the pupils were in unit districts in 1975-76

Third, the data gathered for this report could be used to assess whether a particular state has become more equal or wealth neutral over time. A number of critical caveats must accompany any analysis of this type.

First, only a sub-set of possible equality or wealth neutrality measures are presented in this report and furthermore there may not be consistency among the utilized measures or the unweighted pupil and district units of analysis. Second, the data in this report use a specific resource definition, local and state revenues excluding debt service and capital and this may not be the most preferred resource measure and certainly is not the only resource measure possible. In addition, in some instances local and state revenues for debt service and capital could not be separated from the revenue data. Third, in most states unweighted pupils are utilized rather than weighted pupils and there are some who believe that weighed pupil measures should be employed when categorical state aid is included in the resource variable. Thus, this data set has certain drawbacks for making conclusions about the equity in a particular state over time.

Fourth, the data could be used to assess the equality or wealth neutrality of a particular state compared to other states at one point in time. The caveats that must accompany conclusions of this sort are very serious and tend to cast considerable doubt on the meaningfulness of the conclusions for a given state at a particular point in time. Here comparability across states is a critical issue and a determination of the magnitude of the comparability problem must await a sensitivity analysis of a more comparable data set, although certain sensitivity analyses are undertaken in this report. It is fair to say that the problems of comparability in the revenue, wealth, and pupil variables would preclude most analysts from making conclusions about a particular state at a point in time. In addition to the comparability problems, the issues cited above including the selection of a particular equity measure, the appropriate unit of analysis, the precise resource variable and the pupil weight all must be taken into account when making interstate comparisons.

Based, in part, on this assessment, this report focuses almost entirely on the first two methodological assessments although the conclusions in various states over time are briefly considered. In no instances are the data used to assess the position of one state relative to others at one point in time.

III. Analysis of Equality and Wealth Neutrality Measures Over Time

The purpose of this section and the next is to assess the performance of the equality and wealth neutrality measures when they are used to determine whether a single state has become more equal or more wealth neutral over time. The behavior of the measures within states over time are examined to determine whether the different equality and different wealth neutrality measures agree with or contradict one another. Furthermore, where contradictions exist the nature of the contradictions are examined particularly in relation to the properties of the measures outlined in Section II. First the equality measures are examined, then the wealth neutrality measures. The actual behavior of the measures when used over time in individual states is displayed for each state in Section IV of the report.

A. Equality Measures

The behavior of the nine equality measures, when used in a state over time, is discussed in four parts. First, the agreement among the equality measures in individual states over time is assessed when the measures are computed using the unweighted pupil unit of analysis and second, for the district unit of analysis. The degree to which the measures agree between the two units of analysis when used in a state over time is examined in the third part and the conclusions for the equality measures are presented in the fourth part.

The data availability permits intertemporal comparisons among the equality measures for 21 states. In 15 of these cases data are available for two years, however, in one case data are available for three years, in four cases for four years, and in one case for five years. In addition, in three states the data are organized by multiple district types. If, in each state or district type within a state, the most recent year available is compared to every other year available, a sample of 44 intertemporal comparisons is defined and these 44 intertemporal comparisons are utilized throughout this part to assess the agreement among the equality measures. Note that an intertemporal comparison refers to the use of a number of equality measures to assess whether a state has become more or less equal between two points in time and the sample just described has 44 intertemporal comparisons. The intertemporal comparisons using the nine equality measures for this 44 observation sample are all displayed in Section IV of this report. It should be noted that since California data are available for five years and are organized in three district types, twelve of the 44 observations in the sample are for California. This is taken into account in the presentation and analysis to follow.

These 44 observations are not the only possible intertemporal comparisons that can be made with the available data. If the intertemporal comparisons are not limited to the most recent year available, then an additional 31 comparisons (18 of which are for California) can be generated yielding a 75 observation population. These additional intertemporal comparisons are used in the next part in order to test the robustness of the findings from the 44 observation sample when the unweighted pupil is the unit of analysis.

1. Assessment of Equality Measures in States Over Time Using Unweighted Pupil Unit of Analysis

The particular question addressed in this part may be stated as follows:

> When a number of equality measures, computed using the unweighted pupil unit of analysis, are used to determine whether a state has become more or less equal between two points in time, do the equality measures agree?

In other words, if we pick two points in time for a state and compute a number of equality measures using the unweighted pupil unit of analysis, will the measures all show movement in the same direction?

The least restrictive way to assess the extent to which there is agreement or contradiction among the measures is to compute the percentage of the time all nine equality measures in each intertemporal comparison agree for a sample of intertemporal comparisons. As displayed in Table III-1, the nine equality measures agree in seven cases in the 44 observation sample, or 16% of the time.

The 44 observation sample can be restricted to one observation or intertemporal comparison per state by selecting the observation for the unit (K-12) districts when there are multiple district types, and by selecting the comparison for the longest time period when there are more than two years available for the state. In this 21 state sample (one per state) there is complete agreement among the nine equality measures in six out of 21 or 14% of the cases. If the intertemporal comparisons are not restricted to use the end year for all available comparisons, there are 75 comparisons in all that can be made. In this population of 75 intertemporal comparisons, there is complete agreement in 12 out of 75 or 16% of the cases. These figures for the three samples are displayed in Table III-2. Thus all nine equality measures agree in about one in eight cases.

In order to select a smaller number of equality measures, with the potential of increasing the level of agreement, particular value judgments must be relied upon. An examination of Figure II-1 shows that only the range (R), restricted range (RR), and variance (VAR) are sensitive to equal percentage increases. It is probably safe to assume that most people would prefer a measure that is insensitive to equal percentage increases when the equality measures are used over time since this property provides an approximate control for inflation.

If the set of equality measures is reduced to six, eliminating the range, restricted range, and variance, the level of agreement increases considerably.

In Table III-1 the cases where only the range, restricted range or variance contradict the other six measures are identified for the 44 observation sample. The extent to which the other six equality measures that are insensitive to equal percentage increases (Federal Range Ration (FRR), Relative Mean Deviation (RMD), Permissible Variance (PV), Coefficient of Variation (COV), Standard Deviation of Logarithms (LOGS), Gini Coefficient (GINI)) agree is summarized for all three samples in Table III-2. Now, agreement is close to the 50% level. However, it is important to keep in mind that this required some restrictions in value judgments beyond the selection of the nine equality measure, which is itself a value judgment.

If additional value judgments are accepted the number of equality measures that are utilized for comparisons can be reduced further. For example, the Federal range ratio and the permissible variance could be excluded because they ignore part of the distribution. Furthermore, the relative mean deviation could be excluded since it ignores transfers on one (either) side of the mean. Acceptance of these value judgments reduces the number of equality measures to three; the coefficient of variation, standard deviation of logarithms and Gini coefficient. It should be noted that the standard deviation of logarithms does not show an improvement for all transfers in the upper part of the distribution but this abberation occurs only at the very high end of the distribution, while it occurs for all transfers that do not cross the mean for the relative mean deviation.

With only three equality measures agreement is considerable. As shown in Table III-2, agreement among the coefficient of variation, standard deviation of logarithms and Gini coefficient ranges from 86% in the 21 observation sample to 93% in the 44

TABLE III-1

AGREEMENT AND CONTRADICTIONS AMONG EQUALITY MEASURES IN STATES OVER TIME, UNWEIGHTED PUPIL UNIT OF ANALYSIS

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT R, RR, VAR	COV, LOGS, GINI AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG COV, LOGS, GINI	CONCLUSIONS FROM COV, LOGS, GINI
AL	72-75			R, RR, VAR PV		M
CAL-UN	70-74		VAR			M
CAL-UN	71-74		VAR			M
CAL-UN	72-74	X				M
CAL-UN	73-74		VAR			M
CAL-HS	70-74			R, RR, VAR PV		M
CAL-HS	71-74			R, RR, VAR PV		M
CAL-HS	72-74			R, VAR PV		M
CAL-HS	73-74		R			M
CAL-EL	70-74		R, RR, VAR			M
CAL-EL	71-74		R, RR, VAR			M
CAL-EL	72-74		R, RR, VAR			M
CAL-EL	73-74		VAR			M
COL	72-74				ALL LESS EXCEPT PV, LOGS	?
FLA	72-75			PV		L
FLA	73-75			R, RR, VAR FRR		M
FLA	74-75			PV		L
GEORGIA	72-75				ALL LESS EXCEPT FRR, RMD, GINI	?
ILL-UN	72-75	X				L
ILL-SEC	72-75		R, RR, VAR			M
ILL-EL	72-75	X				L
KAN	72-74				ALL LESS EXCEPT PV, LOGS	?

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT R, RR, VAR	COV, LOGS, GINI AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG COV, LOGS, GINI	CONCLUSIONS FROM COV, LOGS, GINI
KY	72-75			PV		L
LOU	72-75	X				L
MA	72-75		RR, VAR			M
MICH	71-74			R, RR, VAR PV		M
MICH	72-73		RR, VAR			M
MICH	73-74		R, RR, VAR			M
MINN	71-75		RR, VAR			M
MISS	71-75			R, RR, VAR FRR		M
MO-UR	74-75		R, VAR			M
MO-EL	74-75	X				L
NJ	74-77			R, RR, VAR FRR		M
NJ	75-77		R, RR, VAR			M
NJ	76-77			FRR		L
NM	72-75			R, RR, VAR PV		M
NM	73-75			PV		M
NY	74-75	X				M
NC	72-75		R, RR, VAR			M
SC	72-75	X				L
SD	73-75			RR, VAR FRR		M
SD	74-75			R, RR, VAR PV, FRR		M
TEX	74-75		R, RR, VAR			M
WASH	70-74			RMD		L

Key to Tables III-1, III-3, III-5

R = Range
RR = Restricted Range
FRR = Federal Range Ratio
RMD = Relative Mean Deviation
PV = Permissible Variance
VAR = Variance
COV = Coefficient of Variation
LOGS = Standard Deviation of Logarithms
GINI = Gini Coefficient

M = More Equal
L = Less Equal
? = Uncertain Regarding Equality Change

Years are represented by first year of academic year. Thus, 72-75 represent 1972-73 to 1975-76.

Entries in Column headed "ALL AGREE EXCEPT R, RR, VAR" indicate measures that contradict with six equality measures: FRR, RMD, PV, COV, LOGS, GINI.

Entries in column headed "COV, LOG, GINI AGREE BUT CONTRADICTION AMONG" indicate measures that contradict with three equality measures: COV, LOG, GINI.

TABLE III-2

SUMMARY OF AGREEMENT AND CONTRADICTIONS AMONG EQUALITY MEASURES USED INTERTEMPORALLY, UNWEIGHTED PUPIL UNIT OF ANALYSIS

all pts in dist.
take from rich + give to poor

	Complete Agreement Among Nine Equality Measures	Agreement Except R, RR, VAR	Agreement Among COV, LOGS, GINI	Contradiction Among COV, LOGS, GINI
44 Observation Sample	16%	55%	93%	7%
21 Observation Sample	14%	43%	86%	14%
75 Observation Population	16%	51%	89%	11%

eliminate cause
are sensitive
to inflation

observation sample.[1] However, this level of agreement is obtainable only with the acceptance of particular value judgments that some people may find disagreeable.

2. Assessment of Equality Measures In States Over Time Using District Unit of Analysis

The specific question addressed in this part may be stated as follows:

> When a number of equality measures, computed using the district unit of analysis, are used to determine whether a state has become more or less equal between two points in time, do the equality measures agree?

In other words, if we select two points in time for a state and compute a number of equality measures using the district unit of analysis, will the measures all show movement in the same direction?

The strategy utilized in the last part for the unweighted pupil unit of analysis is used here for the district unit of analysis except that only the 44 observation and 21 observation (one per state) samples are discussed.[2]

First, when all nine equality measures are used in the intertemporal comparisons computed on district unit of analysis, Table III-3 indicates that in 11 of 44 or 25% of the cases the nine equality measures are in complete agreement. The results for the sample of 21, restricted to one observation per state, are quite similar; in six of the 21 or 29% of the cases the nine equality measures completely agree. These results as well as those for the subsets of equality measures are displayed in Table III-4.

If only the six equality measures that are insensitive to equal percentage increases are used in the intertemporal comparisons then there is agreement among the six measures in 55% of the observations in the sample of 44 and

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[1] The inclusion of the Relative Mean Deviation in this last group does not change the levels of agreement appreciably in the 44 observation sample .

[2] The inclusion of the 75 observation sample would not change the findings in this part in any significant way.

TABLE III-3

AGREEMENT AND CONTRADICTIONS AMONG EQUALITY MEASURES IN STATES OVER TIME DISTRICT UNIT OF ANALYSIS

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT R, RR, VAR	COV, LOGS, GINI AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG COV, LOGS, GINI	CONCLUSIONS FROM COV, LOGS, GINI
AL	72-75			R, RR, VAR PV, FRR		M
CAL-UN	70-74		R, VAR			M
CAL-UN	71-74		R, VAR			M
CAL-UN	72-74		RR			M
CAL-UN	73-74	X				M
CAL-HS	70-74			R, RR, VAR PV		M
CAL-HS	71-74		R, RR, VAR			M
CAL-HS	72-74			R, RR, VAR FRR		M
CAL-HS	73-74			R PV		M
CAL-EL	70-74				ALL AGREE EXCEPT COV, R, RR, VAR	?
CAL-EL	71-74				ALL AGREE EXCEPT COV, R, RR, VAR	?
CAL-EL	72-74				ALL AGREE EXCEPT COV, R, RR, VAR	?
CAL-EL	73-74	X				M
COL	72-74		R, RR, VAR			M
FLA	72-75		R, RR, VAR			M
FLA	72-75		R			M
FLA	74-75			RR FRR, PV		L
GEORGIA	72-75	X				L
ILL-UN	72-75	X				L
ILL-SEC	72-75		R, RR, VAR			M
ILL-EL	72-75	X				L
KAN	72-74	X				L

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT R, RR, VAR	COV, LOGS, GINI AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG COV, LOGS, GINI	CONCLUSIONS FROM COV, LOGS, GINI
KY	72-75				MORE LESS NO CHG FRR R LOGS RMD RR PV VAR GINI COV	?
LOU	72-75			PV		L
MA	72-75	X				M
MICH	71-74			R, RR, VAR PV		M
MICH	72-74			RR, VAR PV		M
MICH	73-74			R, RR, VAR PV		M
MINN	71-75		RR, VAR			M
MISS	71-75			R, RR, VAR PV		M
MO-UM	74-75			R, RR, VAR RMD		M
MO-EL	74-75	X				L
NJ	74-77		R, RR, VAR			M
NJ	75-77		R, RR, VAR			M
NJ	76-77			RMD, PV		L
NM	72-75			PV		L
NM	73-75		RR			M
NM	74-75	X				M
NC	72-75		R, RR, VAR			M
SC	72-75	X				L
SD	73-75			RR, VAR PV		M
SD	74-75			R, RR, VAR PV		M
TEX	74-75				ALL LESS EXCEPT FRR, PV, LOGS	?
WASH	70-74	X				L

TABLE III-4

SUMMARY OF AGREEMENT AND CONTRADICTIONS AMONG EQUALITY MEASURES USED INTERTEMPORALLY, DISTRICT UNIT OF ANALYSIS

	Complete Agreement Among Nine Equality Measures	Agreement Except R, RR, VAR	Agreement Among COV, LOGS, GINI	Contradiction Among COV, LOGS, GINI
44 Observation Sample	25%	55%	89%	11%
21 Observation Sample	29%	57%	90%	10%

agreement in 57% of the cases in the sample of 21. Finally, when only the coefficient of variation, standard deviation of logarithms, and Gini coefficient are examined there is agreement among the three in 89% and 90% of the cases in the 44 and 21 observation samples, respectively.

Although the results for the complete agreement among the nine equality measures and agreement among the six equality measures show somewhat more agreement for the district compared to the unweighted pupil unit of analysis, the overall pattern of the results is quite similar. That is, certain value judgments must be used to reduce the number of equality measures from the original nine before it can be said that there is considerable agreement among the measures. If the equity evaluation is content to use the coefficient of variation, standard deviation of logarithms, and Gini coefficient, then in roughtly 90% of the cases, using the district (or pupil) unit of analysis, the state appears to be moving toward or away from equality and in only 10% of the cases would the determination be uncertain.[3] But the use of only three measures may not be in line with most people's value judgments.

3. Assessment of Equality Measures In States Over Time: Comparison of District and Unweighted Pupil Units of Analysis

The specific question addressed in this part may be specified as follows:

> When nine equality measures are used to determine whether a state has become more or less equal between two points in time, do the findings from the equality measures computed using a district unit of analysis agree with the findings from the same equality measures using the unweighted pupil unit of analysis?

The focus in this assessment is not whether there is agreement among the measures for one unit of analysis but whether the individual equality measures are consistent across units of analysis. In other words, if for a state between two points in time using the unweighted pupil unit of analysis the coefficient of variation indicates more equality and the Gini coefficient less equality the assessment in this part determines whether the same more-less pattern prevails when the district unit of analysis is utilized.

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[3] The relative mean deviation can be added to the three measures discussed here and the percentage in agreement would not drop below 80% in the 44 or 21 case samples using the districts as the unit of analysis.

The assessment of the behavior of the equality measures computed using both units of analysis is displayed in Table III-5. This table indicates that in eleven of the 44 cases the conclusions from each of the nine equality measures agree across units of analysis. This does not necessarily mean that all eighteen measures for each intertemporal comparison are the same. It does indicate that, when compared pairwise across units of analysis, there is agreement in 25% of the cases for all nine equality measures. The agreement for the 21 case sample is 24%.

The extent of the contradictions among the pairwise comparisons across units of analysis is also displayed in Table III-5. A summary of the contradictions for the 44 and 21 observation samples appears in Tables III-6 and III-7. Table III-6 indicates that in the 44 observation sample there are a total of 65 contradictions out of 396 possibilities (44 x 9) or contradictions in 16% of the cases. In the 21 observation sample there are a total of 40 contradictions out of 189 (21 x 9) or in 21 % of the cases. Table III-6 also shows that for the 44 observation sample, in over 60% of the cases (28/44) there are one or no contradictions between the measures computed using two units of analysis when nine equality measures are computed for each case. However, in a small percentage of the cases there are multiple contradictions when the measures are computed using both units of analysis.

Table III-7 displays the frequency of the contradictions for each particular measure. The range is not listed on the table since it is the same

TABLE III- 5

COMPARISONS OF EQUALITY MEASURES COMPUTED ON DISTRICT AND UNWEIGHTED PUPIL UNITS OF ANALYSIS

STATE	YEAR	AGREEMENT BETWEEN UNITS OF ANALYSIS	DIFFERENCES BETWEEN UNITS OF ANALYSIS							
			RR	FRR	RMD	PV	VAR	COV	LOGS	GINI
AL	72-75			X						
CAL-UN	70-74		X							
CAL-UN	71-74		X							
CAL-UN	72-74		X							
CAL -UN	73-74						X			
CAL-HS	70-74	X								
CAL-HS	71-74					X				
CAL-HS	72-74		X	X		X				
CAL-HS	73-74					X				
CAL-EL	70-74							X		
CAL-EL	71-74							X		
CAL-EL	72-74							X		
CAL-EL	73-74						X			
COL	72-74			X	X			X		X
FLA	72-75			X	X			X	X	X
FLA	73-75		X	X			X			
FLA	74-75		X	X						
GEORGIA	72-75			X	X					X
ILL-UN	72-75	X								
ILL-SEC	72-75	X								
ILL-EL	72-75	X								
KAN	72-74					X			X	
KY	72-75			X	X				X	X
LOU	72-75					X				
MA	72-75		X				X			
MICH	71-74	X								
MICH	72-74					X				
MICH	73-74					X				
MINN	71-75	X								
MISS	71-75			X		X				
MO-U	74-75		X		X					
MO-EL	74-75	X								
NJ	74-77			X						
NJ	75-77	X								
NJ	76-77			X	X	X				
NM	72-75			X	X	X		X	X	X
NM	73-75		X		X					
NM	74-75	X								
NC	72-75	X								
SC	72-75	X								
SD	73-75			X		X				
SD	74-75			X						
TEX	74-75				X			X		X

TABLE III-6

FREQUENCY OF CONTRADICTIONS ACROSS UNITS OF ANALYSIS: EQUALITY MEASURES

	44 Observation Sample	21 Observation Sample
ALL NINE AGREE ACROSS UNITS OF ANALYSIS	11	5
ONE CONTRADICTION OUT OF NINE	17	5
TWO CONTRADICTIONS OUT OF NINE	7	5
THREE CONTRADICTIONS OUT OF NINE	5	2
FOUR CONTRADICTIONS OUT OF NINE	2	2
FIVE CONTRADICTIONS OUT OF NINE	1	1
SIX CONTRADICTIONS OUT OF NINE	1	1
	44	21

TABLE III-7

FREQUENCY OF CONTRADICTIONS FOR EACH EQUALITY MEASURE ACROSS UNITS OF ANALYSIS

	44 Observation Sample	21 Observation Sample
RESTRICTED RANGE	9	3
FEDERAL RANGE RATIO	14	9
RELATIVE MEAN DEVIATION	10	8
PERMISSIBLE VARIANCE	11	5
VARIANCE	4	1
COEFFICIENT OF VARIATION	7	4
STANDARD DEVIATION OF LOGARITHMS	4	4
GINI COEFFICIENT	6	6
TOTAL CONTRADICTIONS	65	40

regardless of unit of analysis. It is apparent from Table III-7 that the smallest subset of measures discussed in the last two parts, the coefficient of variation, standard deviation of logarithms and the Gini Coefficient, exhibit fewer contradictions than most of the other equality measures.[4]

Thus, it appears that there are some differences across units of analysis when equality measures are used intertemporally. Roughly 20% of the time one of the nine equality measures is likely to yield different results if the unit of analysis is the unweighted pupil compared to the district. Thus, more consistency and less ambiguity in conclusions will result if only one unit of analysis is preferred and utilized in intertemporal comparisons.

4. Conclusions: Equality Measures in States Over Time

It is clear from this analysis that there is not perfect agreement among the nine equality measures and between the units of analysis when the measures are used to assess the movement of a state toward or away from equality between two points in time. However, if certain value judgments are accepted, thus reducing the number of equality measures utilized, it is possible to reach a point where three or four equality measures used simultaneously will yield considerable agreement.

If no value judgments are imposed to reduce the number of equality measures and both units of analysis are used, it could be required that all nine equality measures computed on both units of analysis (i.e. eighteen equality measures) agree before a state is assessed as more or less equal between two points in time. If these criteria are imposed on the 44 observation sample, only five cases (Illinois-Unit, 1972-75; Illinois-Elementary, 1972-1975; Missouri-Elementary, 1974-1975; New Mexico, 1974-75; and South Carolina, 1972-75) would be unambiguously more or less equal. This is an example of widespread contradictions.

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[4] It could also be noted that in eight of the ten cases where one or more of these three measures are contradictory across units of analysis, the three units themselves contradict one another within the unweighted pupil or district unit of analysis.

If certain value judgments are imposed, the criteria will turn out to yield substantially more agreement. For example, if three equality measures are utilized, coefficient of variation, standard deviation of logarithms, and Gini coefficient and it is required that all three measures agree with one another for both units of analysis then 34 of the 44 cases can be assessed as more or less equal over time. In the 21 observation sample agreement is obtained in 14 of the 21 cases.

Obviously increased agreement is achieved if only one unit of analysis is employed or the number of equality measures is reduced even further. Thus, the final assessment of the extent of agreement depends on the acceptance of certain value judgments.

B. Wealth Neutrality Measures

The behavior of the nine wealth neutrality measures, when used to assess wealth neutrality in a state over time, is discussed in this part similarly to the previous consideration of the equality measures. First, the agreement among the wealth neutrality measures in individual states over time is assessed when the measures are computed using the unweighted pupil unit of analysis and second, for the district unit of analysis. The degree to which the measures agree between the two units of analysis when used in a state over time is examined in the third part and the conclusions for the wealth neutrality measures are presented in the fourth part.

The same basic samples that were examined for the equality measures are utilized for the wealth neutrality measures. However, data are available for 20 states instead of 21 so that the 44 observation sample, 21 observation sample and the 75 observation sample become the 43, 20, and 74 observation samples respectively. Recall that the 74 observation "sample" includes all possible intertemporal comparisons; the 43 observation sample only uses the latest year available for comparisons with all other years; and the 20 observation sample includes one observation per state.[5]

There are two characteristics of the data employed to compute the wealth neutrality measures that should be pointed out beofre the analyses are presented. First, the wealth measures are equalized state-wide in seventeen of the twenty states analyzed. Where the wealth measures are equalized state-wide, there are different equalization levels used, some of which are below full market level. As a result, there is variation in the state-wide equalization level among states and occasionally within a state over time.

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[5] When more than one intertemporal comparison are available for a state, the 20 observation includes the intertemporal comparison for the longest time period available and the unit (K-12) districts.

Second, in a number of cases the Hickrod Gini was not computed because the Lorenz-like curve crossed the 45° line. In addition, the slope and elasticity from the W, W^2, W^3 regression and the expenditure difference measure were not computed in all cases. However, due to the organization of the analyses to follow and the levels of agreement and contradictions among the data, these missing data do not influence the analyses or conclusions for the wealth neutrality measures.[6]

1. Assessment of Wealth Neutrality Measures in States Over Time Using Unweighted Pupil Unit of Analysis

The particular question addressed in this part may be stated as follows:

> When a number of wealth neutrality measures, computed using the unweighted pupil unit of analysis, are used to determine whether a state has become more or less wealth neutral between two points in time, do the wealth neutrality measures agree?

In other words, if we select two points in time for a state and compute a number of wealth neutrality measures using the unweighted pupil unit of analysis, will the measures all show movement in the same direction?

First the percentage of the time that all wealth neutrality measures agree for a set of intertemporal comparisons can be calculated as the least restrictive assessment, in terms of the value judgments imposed, of the agreement and contradictions among the meausres. As displayed in Table III-8, the calculated wealth neutrality measures all agree in 13 of the 43 cases or 30% of the time. Table III-9 shows that in the 20 observation sample all the wealth neutrality measures agree in four of the 20 cases or 20% of the time and in the 74 observation population 23 of the 74 cases agree or there is complete agreement 31% of the time. This is somewhat more complete agreement than was found

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[6] The assumption used throughout this section is that the missing data would agree. These missing data do not influence the conclusions since there are already contradictions among nine of the 15 cases with missing data (see Table III-8). Furthermore, the elasticity measures are missing in only two cases.

TABLE III-8

AGREEMENT AND CONTRADICTIONS AMONG WEALTH NEUTRALITY MEASURES IN STATES OVER TIME, UNWEIGHTED PUPIL UNIT OF ANALYSIS

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT DIF	ALL ELASTICITY MEASURES AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG ELASTICITY MEASURES	CONCLUSIONS FROM ELASTICITY MEASURES
CAL-UN	70-74		DIF			N
CAL-UN	71-74	X				N
CAL-UN	72-74	X				N
CAL-UN	73-74		DIF			N
CAL-HS	70-74		DIF			N
CAL-HS	71-74		DIF			N
CAL-HS	72-74	X				N
CAL-HS	73-74	X				N
CAL-EL	70-74		DIF			N
CAL-EL	71-74		DIF			N
CAL-EL	72-74		DIF			N
CAL-EL	73-74		DIF			N
COL	72-74				ALL LESS EXCEPT COR, HMBN, ELW	?
FLA[+]	72-75			SLW, SLW2, SLW3		L
FLA[+]	73-75				ALL MORE EXCEPT COR, SLW, ELW	?
FLA[+]	74-75	X				L
GEORGIA[+*]	72-75				ALL LESS EXCEPT SLW2, ELW 2	?
ILL-UN[+]	72-75				ALL LESS EXCEPT COR, ELW	?
ILL-SEC	72-75	X				N
ILL-EL	72-75	X				N
KAN[+*]	72-74	X				L
KY	72-75	X				L

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT DIF	ALL ELASTICITY MEASURES AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG ELASTICITY MEASURES	CONCLUSIONS FROM ELASTICITY MEASURES
LOU**	72-75				ALL MORE EXCEPT SLW, SLW2, SLW3, ELW3	?
MA**	72-75				MORE: COR, SLW, ELW LESS: SLW2, DIF, ELW2	?
MICH	71-74		DIF			M
MICH	72-74		DIF			M
MICH	73-74		DIF			M
MINN+	71-75				ALL LESS EXCEPT COR, SLW, ELW	?
MISS**	71-75				ALL LESS EXCEPT SLW2, ELW2	?
MO-UR	74-75		DIF			M
MO-EL	74-75				ALL LESS EXCEPT SLW, ELW	?
NJ	74-77	X				L
NJ	75-77			DIF COR		M
NJ	76-77				ALL MORE EXCEPT DIF, SLW, ELW	?
NM+	72-75				ALL MORE EXCEPT DIF, SLW3, ELW3	?
NM+	73-75				ALL LESS EXCEPT SLW, ELW	?
NM	74-75	X				M
NC**	72-75	X				M
SC**	72-75			SLW, SLW2, SLW3		M
SD	73-75		DIF			M
SD	74-75	X				M
TEX	74-75			DIF COR, SLW, SLW2 SLW3, HKGM		M
WASH	70-74			COR		L

Key to Tables III-8, III-10, III-12

COR = simple correlation between REV and W
SLW = slope from REV = $a + b_1W$
SLW2 = slope from REV = $a + b_1W + b_2W^2$
SLW3 = slope from REV = $a + b_1W + b_2W^2 + b_3W^3$
DIF = predicted difference in REV; WISDW, REV = $f(W, W^2, W^3)$
HKGN = Hickrod Gini
ELW = Elasticity from SLW
ELW2 = elasticity from SLW2
ELW3 = elasticity from SLW3

M = More Wealth Neutral
L = Less Wealth Neutral
? = Uncertain Regarding Wealth Neutrality Change

Years are represented by first year of academic year. Thus, 72-75 represents 1972-73 to 1975 -76.

Entries in column headed "ALL AGREE EXCEPT DIF" indicate instances where DIF contradict with other wealth neutrality measures.

Entries in column headed "ALL ELASTICITY MEASURES AGREE BUT CONTRADICTIONS AMONG" indicate measures that contradict with three wealth neutrality measures: ELW, ELW2, ELW3.

*EXP DIF not computed.

+HKGN not computed.

°SLW3 and ELW3 not computed.

TABLE III-9

SUMMARY OF AGREEMENT AND CONTRADICTIONS AMONG WEALTH NEUTRALITY MEASURES USED INTERTEMPORALLY, UNWEIGHTED PUPIL UNIT OF ANALYSIS

	Complete Agreement Among All Wealth Neutrality Measures	Complete Agreement Except DIF	Agreement Among ELW, ELW2, ELW3	Contradiction Among ELW, ELW2, ELW3
43 Observation Sample	30%	60%	72%	28%
20 Observation Sample	20%	40%	60%	40%
75 Observation Population	31%	54%	69%	31%

can use correl w/ slope

can be hi when slope low | descriptive

this impt

elasticity for WN equity measures

for the equality measures, but still considerably far from total agreement.

As was the case for the equality measures, the value judgments outlined in Section II can be used to form a smaller set of wealth neutrality measures. It could be argued that a wealth neutrality measure should not be sensitive to equal percentage changes in the wealth variable due to both inflation effects in wealth and varying state-wide equalization levels over time, within a state. One measure that is sensitive to equal percentage changes is the variable based on the predicted value of the regression of REV on W, W^2 and W^3, EXP DIF.

Although EXP DIF is only one of the four wealth neutrality measeres that is sensitive to equal percentage changes, it is worthwhile to examine the behavior of all the other wealth neutrality meausres, except EXP DIF, for two reasons. First, in the sample of 20 observations, one for each state, EXP DIF is not computed in four of 20 cases and since EXP DIF cannot contradict the other wealth neutrality measures in these cases, the meaining of "total agreement" differs across the states. Eliminating EXP DIF partly controls for this difference. Second, empirically it turns out that, of the meausres that are sensitive to equal percentage increases, EXP DIF contradicts more with the other wealth neutrality measures.

Table III-8 shows, for the 43 observation sample, the cases where all wealth neutrality measures agree except EXP DIF, and the extent of the agreement is summarized for all three samples in Table III-9. By excluding EXP DIF from the group of wealth neutrality measures, agreement now ranges from 40% to 60%, depending upon the particular sample examined. Thus, a fair amount of agreement is obtainable if only one measure is excluded from the set of wealth neutrality measures.

In addition to the EXP DIF measures, the three slope measure, SLW, SLW2, and

and SLW3 are sensitive to equal percentage increases in the wealth variable and if a measure that is not sensitive to these changes is preferable, then the slope measures can be excluded. It could also be argued that the wealth neutrality measures should be sensitive to equal additions in the revenue variable. The simple correlation is not sensitive to equal additions to REV while the elasticity measures are and thus the simple correlation could be ignored if this value judgment is accepted. Finally, since the Hickrod Gini is not computable in all cases, an argument can be presented for its exclusion. If all of these arguments (value judgments) are accepted, then the assessment of whether a particular state has become more or less wealth neutral would be made with the three elasticity measures. But it is imperative to note that the use of the elasticity measures alone is based on a series of value judgments that formulated the initial set of nine wealth neutrality measures and eliminated six of the nine for a number of reasons.

Table III-8 shows for the 43 observation sample the extent of the agreement for the three elasticity measures. Table III-9 indicates that the three elasticity measures agree in 72%, 60% and 69% of the cases for the 43, 20, and 74 observation samples respectively. Thus, even when value judgments are imposed to a point where only three elasticity measures computed using the unweighted pupil unit of analysis are used to assess whether a state has become more or less wealth neutral over time, an unambiguous judgment can be made in only two out of three cases. This is somewhat less than when three equality measures computed using the unweighted pupil unit of analysis were used to assess a state's movement toward or away from equality.

2. Assessment of Wealth Neutrality Measures In States Over Time Using District Unit of Analysis

The particular question addressed in this part may be stated as follows:

> When a number of wealth neutrality measures, computed using the district unit of analysis, are used to determine whether a state has become more or less wealth neutral between two points in time, do the measures agree?

In other words, if we select two points in time for a state and compute a number of wealth neutrality measures using the district unit of analysis, will the measures show movement in the same direction?

The 43 and 20 observation samples are examined in this part using the strategy employed for the wealth neutrality measures for the unweighted pupil unit of analysis.

Table III-10 displays an analysis of the intertemporal comparisons for the 43 (and 20) observation sample(s) and indicates that in 14 of the 43 cases and 5 of the 20 cases there is complete agreement among all the wealth neutrality measures. Table III-11 shows that the agreement is 33% and 25% in the two samples, and these figures are quite similar to those obtained for the wealth neutrality measures using the unweighted pupil unit of analysis.

When the wealth neutrality measure EXP DIF is not included, there is agreement among the remaining wealth neutrality measures in 58% and 40% of the cases for the 43 and 20 observation samples, respectively. When only the three elasticity measures using the district unit of analysis are utilized to assess a state's movement toward or away from wealth neutrality, there is agreement among the three measures in 70% of the cases in the 43 observation sample and in 60% of the cases in the 20 observation sample. The results describing the extent of agreement for the subsets of wealth neutrality measures using the district as the unit of analysis are also very similar to the unweighted pupil results for the wealth neutrality measures.

As was the case for the equality measures, reasonable agreement among the wealth neutrality measures using either unit of analysis, can be obtained

TABLE III - 10

AGREEMENT AND CONTRADICTIONS AMONG WEALTH NEUTRALITY MEASURES IN STATES OVER TIME, DISTRICT UNIT OF ANALYSIS

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT DIF	ALL ELASTICITY MEASURES AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG ELASTICITY MEASURES	CONCLUSIONS FROM ELASTICITY MEASURES
CAL-UN	70-74		DIF			M
CAL-UN	71-74	X				M
CAL-UN	72-74	X				M
CAL-UN	73-74	X				M
CAL-HS	70-74		DIF			M
CAL-HS	71-74	X				M
CAL-HS	72-74	X				M
CAL-HS	73-74		DIF			M
CAL-EL	70-74		DIF			M
CAL-EL	71-74			DIF SLW2		M
CAL-EL	72-74		DIF			M
CAL-EL	73-74				ALL MORE EXCEPT SLW2, ELW2	?
COL	72-74			DIF SLW, SLW2, SLW3		M
FLA	72-75			DIF HKGN		M
FLA	73-75				ALL MORE EXCEPT COR, SLW, HKGN, ELW	?
FLA	74-75			SLW2		L
GEORGIA +*	72-75				ALL LESS EXCEPT SLW2, ELW2	?
ILL-UN	72-75	X				M
ILL-SEC	72-75	X				M
ILL-EL	72-75				ALL MORE EXCEPT SLW, ELW	?
KAN +*	72-74	X				L
KY	72-75				ALL LESS EXCEPT COR, SLW3, HKGN, ELW3	?

STATE	YEARS	ALL AGREE	ALL AGREE EXCEPT DIF	ALL ELASTICITY MEASURES AGREE BUT CONTRADICTION AMONG	CONTRADICTION AMONG ELASTICITY MEASURES	CONCLUSIONS FROM ELASTICITY MEASURES
LOU^{*+}	72-75	X				L
MA $^{+*}$					MORE: COR, SLW, ELW LESS: SLW2, DIF, ELW2	?
MICH	71-74		DIF			M
MICH	72-74		DIF			M
MICH	73-74				ALL MORE EXCEPT DIF, ELW3	?
MINN^{+}	71-75				ALL MORE EXCEPT SLW3, DIF, ELW3	?
MISS^{*+}	71-75				MORE: SLW2, ELW2, ELW3 LESS: COR, SLW, ELW	?
MO-UR	74-75				ALL MORE EXCEPT DIF, ELW2, ELW	?
MO-EL	74-75				ALL LESS EXCEPT COR, SLW, SLW2, ELW	?
NJ	74-77		DIF			M
NJ	75-77			DIF COR, SLW		M
NJ	76-77	X				L
NM^{+}	72-75		DIF			M
NM^{+}	73-75		DIF			M
NM^{+}	74-75	X				M
NC^{*+}	72-75	X				M
SC^{*+}	72-75			COR		L
SD	73-75	X				M
SD	74-75	X				M
TEX	74-75				ALL MORE EXCEPT SLW, ELW	?
WASH	70-74				ALL LESS EXCEPT COR, ELW	?

TABLE III-11

SUMMARY OF AGREEMENT AND CONTRADICTIONS AMONG WEALTH NEUTRALITY MEASURES USED INTERTEMPORALLY, DISTRICT UNIT OF ANALYSIS

	Complete Agreement Among All Wealth Neutrality Measures	Complete Agreement Except DIF	Agreement Among ELW, ELW2, ELW3	Contradiction Among ELW, ELW2, ELW3
43 Observation Sample	33%	58%	70%	30%
20 Observation Sample	25%	40%	60%	40%

only by using value judgments to select a small number of wealth neutrality measures. When only the elasticity measures are utilized, agreement among the three measures using either unit of analysis occurs in about two out of three cases. However, this is less agreement than the 90% level that was obtained for the equality measures; the coefficient of variation, standard deviation of logarithms and Gini coefficient.

3. Assessment of Wealth Neutrality Measures in States Over Time: Comparison of District and Unweighted Pupil Units of Analysis

The particular question addressed in this part may be expressed as follows:

> When a number of wealth neutrality measures are used to determine whether a state has become more or less wealth neutral over time, do the findings from the wealth neutrality measures computed using a district unit of analysis agree with the findings from the same wealth neutrality measures using the unweighted pupil unit of analysis?

In this part the concern is not whether there is agreement among the measures for one unit of analysis but whether the individual wealth neutrality measures are consistent across units of analysis. In other words, if for a state between two points in time using the unweighted pupil unit of analysis the simple correlation indicates more wealth neutrality and the elasticity computed from REV = f(W) less wealth neutrality, the assessment in this part determines whether the identical more-less pattern prevails when the district unit of analysis is employed.

The pairwise comparisons for the wealth neutrality measures across units of analysis are displayed in Table III-12. In 17 of the 43 or 40% of the cases the conclusions from each of the wealth neutrality measures agree across units of analysis. Recall that this does not necessarily mean that all (eighteen or fewer) wealth neutrality measures for each intertemporal comparison are the same. It does indicate that, when compared pairwise across units of analysis, there is agreement in 40% of the cases in the 43 observation sample for all the

TABLE III-12

COMPARISON OF WEALTH NEUTRALITY MEASURES COMPUTED ON DISTRICT AND UNWEIGHTED PUPIL UNIT OF ANALYSIS

						DIFFERENCES BETWEEN UNITS OF ANALYSIS					
STATE	YEAR	AGREEMENT BETWEEN UNITS OF ANALYSIS	COR	SLW	SLW2	SLW3	DIF	HKGM	ELW	ELW2	ELW3
CAL-UN	70-74	X									
CAL-UN	71-74	X									
CAL-UN	72-74	X									
CAL-UN	73-74						X				
CAL-HS	70-74	X									
CAL-HS	71-74						X				
CAL-HS	72-74	X									
CAL-HS	73-74						X				
CAL-EL	70-74	X									
CAL-EL	71-74				X						
CAL-EL	72-74	X									
CAL-EL	73-74				X		X			X	
COL	72-74									X	X
FLA[+]	72-75		X						X	X	X
FLA[+]	73-75	X									
FLA[+]	74-75				X						
GEORGIA[+*]	72-75	X									
ILL-UN[+]	72-75			X	X	X	X			X	X
ILL-SEC	72-75	X									
ILL-EL	72-75			X					X		
KAN[+*]	72-74	X									
KY	72-75		X			X		X			X
LOU[**]	72-75		X						X	X	
MA[+*]	72-75	X									
MICH	71-74	X									
MICH	72-74	X									
MICH	73-74										X
MINN[+]	71-75				X					X	
MISS[**]	71-75										X
MO-UN	74-75									X	X
MO-EL	74-75		X	X							
NJ	74-77		X	X	X	X		X	X	X	X
NJ	75-77			X							
NJ	76-77		X		X	X		X		X	X
NM[+]	72-75					X					X
NM[+]	73-75		X		X	X				X	X
NM[+]	74-75	X									
NC[**]	72-75	X									
SC[**]	72-75								X	X	X
SD	73-75						X				
SD	74-75	X									
TEX	74-75		X	X	X		X	X	X		
WASH	70-74								X		

computed wealth neutrality measures and the agreement figure for all computed wealth neutrality measures is six out of 20 or 30% for the one per state sample.

Further analyses of the pairwise comparisons across units of analysis appear in Tables III-13 and III-14. Table III-13 implies that there are 70 contradictions in the 43 observation sample out of 364 possibilities or contradictions in 19% of the cases.[7] In the 20 observation sample there are contradictions in 45 cases out of 161 possibilities or 28% of the cases.[8] Table III-13 also shows that in 63% (27/43) and 45% (9/20) of the intertemporal comparisons there is one or no contradictions among the wealth neutrality measures, for the 43 and 20 observation samples, respectively. Thus, the incidence of multiple contradictions is similar for the wealth neutrality measures and the equality measures examined earlier.

Table III-14 summarizes the frequency of contradictions for each particular wealth neutrality measures. Note that the elasticity measures are somewhat more contradictory across units of analysis compared to the other six measures.

Thus it appears that the unit of analysis makes a difference and more so for the elasticity measures. Contradictions range between 19%(43 observation sample) and 28% (20 observation sample) of the measures for all the wealth neutrality measures although the contradictions among the elasticity measures, across units of analysis, range between 24% (43 observation sample) to 40% (20 observation sample) of the measures. As was the case for the equality measures, more consistency and less ambiguity will result if only one unit of analysis is selected and utilized in intertemporal comparisons.

---

[7] The total possibilities in the 43 observation sample are 43 x 9 less the 32 measures that are not computed. ((43 x 9) - 23) = (387 - 23) = 364.

[8] The total possibilities in the 20 observation sample are 20 x 9 less the 19 measures that are not computed. ((20 x 9) - 19) = (180 - 19) = 161.

TABLE III-13

FREQUENCY OF CONTRADICTIONS ACROSS UNITS OF ANALYSIS: WEALTH NEUTRALITY MEASURES

	43 Observation Sample	20 Observation Sample
ALL COMPUTED WEALTH NEUTRALITY MEASURES AGREE ACROSS UNITS OF ANALYSIS	17	6
ONE CONTRADICTION	10	3
TWO CONTRADICTIONS	6	4
THREE CONTRADICTIONS	3	2
FOUR CONTRADICTIONS	2	2
FIVE CONTRADICTIONS	1	1
SIX CONTRADICTIONS	3	1
SEVEN CONTRADICTIONS	-	-
EIGHT CONTRADICTIONS	1	1
	43	20

TABLE III-14

FREQUENCY OF CONTRADICTIONS FOR EACH WEALTH NEUTRALITY MEASURE ACROSS UNITS OF ANALYSIS

	43 Observation Sample	20 Observation Sample
SIM CORR	8	5
SLOPE W	5	2
SLOPE W2	9	4
SLOPE W3	7	5
EXP DIF	7	3
HICK GINI	4	3
ELAST W	7	6
ELAST W2	11	8
ELAST W3	12	9
	70	45

4. Conclusions: Wealth Neutrality Measures In States Over Time

These analyses show that there are far more than trivial contradictions among the nine wealth neutrality measures and between units of analysis when these measures are utilized to determine whether a state has become more or less wealth neutral over time. However, if the number of wealth neutrality measures is reduced by accepting certain value judgments and only one unit of analysis is used, then it is possible to obtain a fair amount of agreement among these wealth neutrality measures.

If both units of analysis are used simultaneously and no value judgments are imposed to reduce the number of wealth neutrality measures, it would be required that all computed wealth neutrality measures on both units of analysis agree before a state is assessed as more or less wealth neutral between two points in time. If these criteria are imposed in the 43 observation sample, only eight of the 43 intertemporal comparisons would be judged as unambiguously more or less wealth neutral. Widespread contradictions would also be the case in the one per state sample; only two out of the twenty cases would be assessed as more or less wealth neutral with these criteria.

Somewhat more agreement can be obtained if certain value judgments are accepted. If, for example, the three elasticity measures are utilized and a case is not judged to be more or less wealth neutral unless all three elasticity measures computed on both the unweighted pupil and district units of analysis agree, then 21 of the 43 and 5 of the 20 intertemporal comparisons can be judged unambiguously. Agreement would be increased if the number of measures is reduced even further or if only one unit of analysis is utilized. Thus, widespread agreement for the wealth neutrality measures can be achieved only if a very substantial array of value judgments are accepted. It appears to be somewhat more difficult to obtain substantial agreement among the wealth neutrality meausres compared to the equality measures when the measures are used over time.

IV. Intertemporal Comparisons

Section IV contains the tables that comprise the data for the intertemporal comparisons analyzed in Section III. Tables are presented for the 44 observation sample of equality intertemporal comparisons and 43 observation sample of wealth neutrality intertemporal comparisons. Since the "one observation per state samples" are subsets of these larger samples, they are also displayed.

Each table displays the behavior of the equality and wealth neutrality measures over time for a particular state and several combinations of units of analysis, years, and district types. The years indicated are the first year of the academic year. That is, if the heading reads "change from 1972 to 1975", this indicates that the equality and wealth neutrality measures are examined from 1972-73 to 1975-76. A "MORE Equal" next to a particular equality measure under the heading "change from 1972 to 1975" means that the particular equality measure assesses the state-unit of analysis-district type represented in that column on the Table as more equal in 1975-76 compared to 1972-73.

All the Tables displayed in Section IV are computed from the data included in Appendix C.

TABLE IV-1

STATE - ALABAMA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975 DISTRICT	 UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	MORE "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	LESS "	LESS "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation		
2. Slope - W		
3. Slope - W, W^2		
4. Slope - W, W^2, W^3		
5. Expenditure Difference		
6. Hickrod Gini		
7. Elasticity - W		
8. Elasticity -W, W^2		
9. Elasticity - W, W^2, W^3		

TABLE IV-2

STATE - CALIFORNIA

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - UNIFIED

	Changes from			
Measure of Equality and Wealth Neutrality	1970-1974	1971-1974	1972-1974	1973-1974
A. EQUALITY				
1. Range	MORE Equal	MORE Equal	MORE Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	LESS "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	MORE " "	MORE " "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-3

STATE - CALIFORNIA

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - UNIFIED

	Changes from			
Measure of Equality and Wealth Neutrality	1970-1974	1971-1974	1972-1974	1973-1974
A. EQUALITY				
1. Range	MORE Equal	MORE Equal	MORE Equal	MORE Equal
2. Restricted Range	MORE "	MORE "	MORE "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "	LESS "
6. Variance	LESS "	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE Wlth Neut	MORE Wlth Neut	MORE Wlth Neut	MORE Wlth Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	MORE " "	MORE " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-4

STATE - CALIFORNIA

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - HIGH SCHOOL

Measure of Equality and Wealth Neutrality	Changes from 1970-1974	 1971-1974	 1972-1974	 1973-1974
A. EQUALITY				
1. Range	LESS Equal	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "	MORE "
3. Federal Range Ratio	MORE "	MORE "	LESS "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	MORE "	MORE "	LESS "
6. Variance	LESS "	LESS "	LESS "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	MORE " "	MORE " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-5

STATE - CALIFORNIA

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - HIGH SCHOOL

	Changes from			
Measure of Equality and Wealth Neutrality	1970-1974	1971-1974	1972-1974	1973-1974
A. EQUALITY				
1. Range	LESS Equal	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	MORE "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	LESS "	LESS "	MORE "
6. Variance	LESS "	LESS "	LESS "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	MORE " "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-6

STATE - CALIFORNIA

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ELEMENTARY

Measure of Equality and Wealth Neutrality	Changes from 1970-1974	1971-1974	1972-1974	1973-1974
A. EQUALITY				
1. Range	LESS Equal	LESS Equal	LESS Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	LESS "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "	MORE "
7. Coefficient of Variation	LESS "	LESS "	LESS "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	LESS " "	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-7

STATE - CALIFORNIA

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ELEMENTARY

Measure of Equality and Wealth Neutrality	Changes from			
	1970-1974	1971-1974	1972-1974	1973-1974
A. EQUALITY				
1. Range	LESS Equal	LESS Equal	LESS Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	LESS "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-8

STATE - COLORADO

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1974	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	LESS "
4. Relative Mean Deviation	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	MORE "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE Wlth Neut	MORE Wlth Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "

TABLE IV-9

STATE - FLORIDA

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from:		
	1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	MORE "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	MORE "	LESS "
7. Coefficient of Variation	MORE "	MORE "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	LESS With Neut	LESS With Neut
2. Slope - W	MORE " "	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	LESS " "
5. Expenditure Difference	LESS " "	MORE " "	LESS " "
6. Hickrod Gini	LESS " "	LESS " "	LESS " "
7. Elasticity - W	MORE " "	LESS " "	LESS " "
8. Elasticity -W, W^2	MORE " "	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	LESS " "

TABLE IV-10

STATE - FLORIDA

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from:		
	1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	LESS "	MORE "	LESS "
8. Standard Deviation of Logarithms	LESS "	MORE "	LESS "
9. Gini Coefficient	LESS "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	LESS With Neut	LESS With Neut	LESS With Neut
2. Slope - W	MORE " "	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	LESS " "
5. Expenditure Difference	LESS " "	MORE " "	LESS " "
6. Hickrod Gini	-	-	-
7. Elasticity - W	LESS " "	LESS " "	LESS " "
8. Elasticity -W, W^2	LESS " "	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	LESS " "	MORE " "	LESS " "

TABLE IV-11

STATE - GEORGIA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	CHANGE FROM 1972 to 1975 DISTRICT	 UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	MORE "
4. Relative Mean Deviation	LESS "	MORE "
5. Permissible Variance	LESS "	LESS "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "
9. Gini Coefficient	LESS "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	LESS With Neut	LESS With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	MORE " "
4. Slope - W, W^2, W^3	-	-
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	-	-
7. Elasticity - W	LESS " "	LESS " "
8. Elasticity -W, W^2	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	-	-

TABLE IV-12

STATE - ILLINOIS

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL, WEIGHTED PUPIL

DISTRICT TYPE - UNIT, K-12

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "	LESS "
5. Permissible Variance	LESS "	LESS "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "	LESS "
9. Gini Coefficient	LESS "	LESS "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	LESS " "	MORE " "
3. Slope - W, W^2	MORE " "	LESS " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	LESS " "	MORE " "
5. Expenditure Difference	MORE " "	LESS " "	MORE " "
6. Hickrod Gini	MORE " "	-	-
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "	MORE " "

TABLE IV-13

STATE - ILLINOIS

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL, WEIGHTED PUPIL

DISTRICT TYPE - SECONDARY

	Change from 1972 to 1975		
Measure of Equality and Wealth Neutrality	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	LESS "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	MORE " "	MORE " "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

TABLE IV-14

STATE - ILLINOIS

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL, WEIGHTED PUPIL

DISTRICT TYPE - ELEMENTARY

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "	LESS "
5. Permissible Variance	LESS "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "	LESS "
9. Gini Coefficient	LESS "	LESS "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	LESS " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	MORE " "	MORE "" "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "
7. Elasticity - W	LESS " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

TABLE IV-15

STATE - KANSAS

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "
5. Permissible Variance	LESS "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	MORE "
9. Gini Coefficient	LESS "	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	LESS With Neut	LESS With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	-	-
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	-	-
7. Elasticity - W	LESS " "	LESS " "
8. Elasticity -W, W^2	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	-	-

TABLE IV-16

STATE - KENTUCKY

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975 DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	LESS "
4. Relative Mean Deviation	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	NO CHANGE	LESS "
9. Gini Coefficient	MORE Equal	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	LESS With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	LESS " "
7. Elasticity - W	LESS " "	LESS " "
8. Elasticity -W, W^2	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "

TABLE IV-17

STATE - LOUISIANA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "
5. Permissible Variance	MORE "	LESS "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "
9. Gini Coefficient	LESS "	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	LESS With Neut	MORE With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	-	-
6. Hickrod Gini	-	-
7. Elasticity - W	LESS " "	MORE " "
8. Elasticity -W, W^2	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3	LESS " "	LESS " "

TABLE IV-18

STATE - MAINE

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975 DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	MORE Equal	MORE Equal
2. Restricted Range	MORE "	LESS "
3. Federal Range Ratio	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "
6. Variance	MORE "	LESS "
7. Coefficient of Variation	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	-	-
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	-	-
7. Elasticity - W	MORE " "	MORE " "
8. Elasticity -W, W^2	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	-	-

TABLE IV-19

STATE - MICHIGAN

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from 1971 to 1974	 1972 to 1974	 1973 to 1974
A. EQUALITY			
1. Range	LESS Equal	MORE Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE Wlth Neut	MORE Wlth Neut	MORE Wlth Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	LESS " "

TABLE IV-20

STATE - MICHIGAN

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

	Changes from		
Measure of Equality and Wealth Neutrality	1971 to 1974	1972 to 1974	1973 to 1974
A. EQUALITY			
1. Range	LESS Equal	MORE Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

TABLE IV-21

STATE - MINNESOTA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1971 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	MORE Equal	MORE Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	-	-
7. Elasticity - W	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	LESS " "	LESS " "

TABLE IV-22

STATE - MISSISSIPPI

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1971 to 1975 DISTRICT	 UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	LESS "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	LESS "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	LESS With Neut	LESS With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	MORE " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	-	-
6. Hickrod Gini	-	-
7. Elasticity - W	LESS " "	LESS " "
8. Elasticity -W, W^2	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "

TABLE IV-23

STATE - MISSOURI

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - UNIFIED, ELEMENTARY

Measure of Equality and Wealth Neutrality	UNIFIED Change from 1974 to 1975		ELEMENTARY	
	DISTRICT	UNWEIGHTED PUPIL	DISTRICT	UNWEIGHTED PUP
A. EQUALITY				
1. Range	LESS Equal	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	MORE "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	MORE "	LESS "	LESS "
5. Permissible Variance	MORE "	MORE "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	LESS "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "	LESS "
9. Gini Coefficient	MORE "	MORE "	LESS "	LESS "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	LESS With Neu
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	LESS " "	LESS " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	LESS " "	MORE " "	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	LESS " "	MORE " "	LESS " "	LESS " "

TABLE IV-24

STATE - NEW JERSEY

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from 1974 to 1977	1975 to 1977	1976 to 1977
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	LESS "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	LESS With Neut	LESS With Neut
2. Slope - W	MORE " "	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	LESS " "
7. Elasticity - W	MORE " "	MORE " "	LESS " "
8. Elasticity -W, W^2	MORE " "	MORE " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	LESS " "

TABLE IV-25

STATE - NEW JERSEY

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

		Changes from	
Measure of Equality and Wealth Neutrality	1974 to 1977	1975 to 1977	1976 to 1977
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	LESS Wlth Neut	LESS Wlth Neut	MORE Wlth Neut
2. Slope - W	LESS " "	MORE " "	LESS " "
3. Slope - W, W^2	LESS " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	LESS " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	-	MORE " "	MORE " "
7. Elasticity - W	LESS " "	MORE " "	LESS " "
8. Elasticity -W, W^2	LESS " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	LESS " "	MORE " "	MORE " "

TABLE IV-26

STATE - NEW MEXICO
UNIT OF ANALYSIS - DISTRICT
DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from: 1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	MORE Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	MORE "
3. Federal Range Ratio	LESS "	MORE "	MORE "
4. Relative Mean Deviation	LESS "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	MORE "	MORE "
7. Coefficient of Variation	LESS "	MORE "	MORE "
8. Standard Deviation of Logarithms	LESS "	MORE "	MORE "
9. Gini Coefficient	LESS "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	MORE " "
6. Hickrod Gini	-	-	-
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

TABLE IV-27

STATE - NEW MEXICO

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from: 1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	MORE Equal	MORE Equal
2. Restricted Range	LESS "	MORE "	MORE "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	LESS "	MORE "
6. Variance	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	LESS With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	LESS " "	MORE " "
4. Slope - W, W^2, W^3 *	LESS " "	LESS " "	MORE " "
5. Expenditure Difference *	LESS " "	LESS " "	MORE " "
6. Hickrod Gini	-	-	-
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3 *	LESS " "	LESS " "	MORE " "

* Negative wealth neutrality measures evaluated as positive values; i.e., more negative is not more wealth neutral.

TABLE IV-28

STATE - NORTH CAROLINA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975 DISTRICT	Change from 1972 to 1975 UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "
5. Expenditure Difference	-	-
6. Hickrod Gini	-	-
7. Elasticity - W	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "

TABLE IV-29

STATE - SOUTH CAROLINA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "
5. Permissible Variance	LESS "	LESS "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "
9. Gini Coefficient	LESS "	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	MORE With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	-	-
6. Hickrod Gini	-	-
7. Elasticity - W	LESS " "	MORE " "
8. Elasticity -W, W^2	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3	LESS " "	MORE " "

TABLE IV-30

STATE - SOUTH DAKOTA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1973 to 1975		Change from 1974 to 1975	
	DISTRICT	UNWEIGHTED PUPIL	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY				
1. Range	MORE Equal	MORE Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	LESS "	MORE "	LESS "
4. Relative Mean Deviation	MORE "	MORE "	MORE "	MORE "
5. Permissible Variance	LESS "	MORE "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	MORE With Neut	MORE With Neut	MORE With Neut	MORE With Neut
2. Slope - W	MORE " "	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	MORE " "	LESS " "	MORE " "	MORE " "
6. Hickrod Gini	MORE " "	MORE " "	MORE " "	MORE " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "	MORE " "

TABLE IV-31

STATE - TEXAS

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1974 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "
4. Relative Mean Deviation	LESS "	MORE "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "
9. Gini Coefficient	LESS "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	LESS With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	LESS " "
5. Expenditure Difference	MORE " "	LESS " "
6. Hickrod Gini	MORE " "	LESS " "
7. Elasticity - W	LESS " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "

TABLE IV-32

STATE - WASHINGTON

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1970 to 1974	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "
4. Relative Mean Deviation	LESS "	MORE "
5. Permissible Variance	LESS "	LESS "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "
9. Gini Coefficient	LESS "	LESS "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE Wlth Neut	MORE Wlth Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	LESS " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	LESS " "	LESS " "
7. Elasticity - W	MORE " "	LESS " "
8. Elasticity -W, W^2	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	LESS " "	LESS " "

V. Analysis of Equality and Wealth Neutrality Measures Across States

In this section the performance of the equality and wealth neutrality measures is analyzed when the measures are used to rank a number of states at one point in time. Interstate comparisons of equality and wealth neutrality are worthy of examination for several reasons. First, when a state's movement toward or away from equality or wealth neutrality is assessed over time, the movement takes on added meaning when viewed in conjunction with a state's position relative to the other states. A movement away from equality in a state that is relatively equal may not be as troublesome as the same movement in a state that is relatively unequal when ranked against other states.

Second, the measurement of equality and wealth neutrality across states is currently being carried out by the Federal government in its legislation for impact aid. Since the Federal government is using certain specific measures for interstate comparisons, it is important to understand the performance of the measures utilized by the Federal government, as well as those alternatives not included in Federal regulations, if Federal policies are to be evaluated.

Third, regardless of whether they should or not, a large number of participants in the school finance "community" use interstate comparisons in the legislative, executive, and judicial spheres. Since it is fairly certain that a multitude of interstate comparisons will be carried out in the future, it is critical that the methodology and potential problems involved in these comparisons are well understood and widely disseminated.

This section is divided into two major parts; the first part examines the equality measures and the second the wealth neutrality measures. However, a similar methodology is utilized in both parts. First, a number of equality (wealth neutrality) measures are used to rank from eighteen to twenty-two states[1] at one point in time and the resulting rankings are compared pairwise for all the equality (wealth neutrality[2]) measures. That is, nine different equality measures are used to rank twenty-two states from most to least equal and these rankings are compared for all pairs of measures.

Three different statistics are used to assess the extent of agreement between the pairs of equality measures when they are used to rank states at one point in time. These measures are explained, then illustrated with a common example. First, Spearman rank correlations (ρ_s) are computed between all pairs of rankings yielded by two equality measures.[3] The formula for the Spearman rank correlation is the following:

$$\rho_s = 1 - \frac{6 \sum_{i=1}^{N} (d_i^{\,2})}{N^3 - N}$$

Where d_i is the difference between the ranks assigned to each state by the two different measures and N is the number of states in the sample.[4] The Spearman rank correlation ranges from 1 (identical rankings) to -1 (opposite rankings).

---

[1] The number of states used in the interstate comparisons depends on data availability. As explained below, twenty-two states are examined with equality measures and eighteen with wealth neutrality measures.

[2] The discussion in the remainder of this introduction is valid for the analysis of both equality and wealth neutrality measures to follow. However, for brevity, only equality measures are mentioned.

[3] Thirty-six unique pairs of rankings are obtained when each of nine measures is paired with every other measure.

[4] The Spearman rank correlations were computed by SPSS Version 7.

The second statistic computed to assess the agreement among the rankings yielded by the equality measures taken two at a time is the percentage of all pairs of states that are ranked in the same order by both equality measures. This statistic is called the Agreement-Conflict (AC) measure and is calculated in the following manner. For any set of N states, there are $N \frac{(N-1)}{2}$ unique pairs of states. When an equality measure is used to rank these N states, there will be $N \frac{(N-1)}{2}$ pairs of states with one state ranked higher than the other, ignoring ties. The Agreement-Conflict measure is the percentage of the $N \frac{(N-1)}{2}$ pairs of states that are ranked in the same order by the two equality measures. This measure ranges from 1 (all pairs ranked in the same order) to 0 (all of the pairs ranked in the opposite order). Usually the measure ranges between zero and one and thus indicates the percentage of pairs of states that are ranked in the same order.

The third and final statistic used to assess the agreement among the rankings yielded by two equality measures is the concordance measure.[5] Usually the concordance measure is utilized when the extent of the agreement among more than two rankings is to be assessed. However, the concordance measure can be computed for two rankings and it is computed for the pairs of rankings so that the behavior of the concordance statistic will be more familiar when it is used to assess the agreement among three and four equality measures.

The concordance measure (W) may be computed as follows:

$$W = \frac{12 \left(\sum_{i=1}^{N} \left(\sum_{j=1}^{M} R_{ij} - \left(\tfrac{1}{2} M (N+1) \right)^2 \right) \right.}{M^2 (N^3 - N)}$$

where M is the number of equality measures (two in this case), N is the number of states being ranked, and R_{ij} is the rank assigned by the j^{th} measure to the i^{th} state. The concordance measure can be viewed as the actual sum of squared deviations from the situation where all states receive the same total or average rank from all measures divided by the maximum sum of squared deviation if all states were ranked in the same order by all measures. This can be seen from the formula for W by noting that $\frac{1}{2}M\ (N + 1)$ is the average sum of ranks assigned to N states by M measures and $\frac{1}{12}M^2\ (N^3 - N)$ is the maximum sum of squares if all states are ranked in the identical order by each measure, without ties. The concordance measure ranges from 1 (perfect agreement among all measures) to 0 (no agreement among the measures).

---

[5] See Kendell, M.G., Rank Correlation Methods, 4th Edition. London: Griffin (1970), Chapter 6. I am indebted to Richard Schramm for calling this statistic to my attention.

The mechanics of the three measures can be illustrated with an example. Table V-1A shows the values of two equality measures (X and Y) computed for four states (A, B, C, and D), and the resulting ranks labelled Rank (X) and Rank (Y). The calculation of the Spearman rank correlation is shown in Table V-1B. The sum of the difference between the ranks, squared, is 6 and the resulting Spearman rank correlation is .40. Table V-1C illustrates the computation of the Agreement-Conflict measure. In the example there are six pairs of states, four of which are ranked in the same order by both measures. Therefore, the Agreement-Conflict measure is four divided by six or .67. Finally, the calculation of the concordance measure appears in Table V-1D. Since there are two measures and four states the average sum of ranks for each state is $\frac{1}{2}(2)\ (4 + 1)$ or 5. The sum of squared deviations from 5 is divided by the maximum sum of square deviations yielding a concordance measure of .70.

It should be noted that the rank correlation ranges from -1 to 1 while the Agreement-Conflict and concordance measures range from 0 to 1. The concordance measure for two rankings is very similar to the Spearman rank correlation but

TABLE V-1

A. BASIC DATA USED TO COMPUTE EXTENT OF AGREEMENT AMONG RANKS

STATE	EQUALITY MEASURE X	RANK (X) (1 = MOST EQUAL)	EQUALITY MEASURE Y	RANK (Y) (1 = MOST EQUAL)
A	.1100	1	.0110	1
B	.1200	2	.0120	3
C	.1300	3	.0125	4
D	.1400	4	.0115	2

B. CALCULATION OF SPEARMAN RANK CORRELATION

STATE	RANK (X)	RANK (Y)	d_1	d_1^2
A	1	1	0	0
B	2	3	-1	1
C	3	4	-1	1
D	4	2	2	4

$$\rho_s = \frac{6(\Sigma d_1^2)}{N^3 - N} = 1 - \frac{6(1 + 1 + 4)}{4^3 - 4} = 1 - \frac{36}{60} = .40$$

C. CALCULATION OF AGREEMENT - CONFLICT MEASURE

PAIRS OF STATES	MEASURE X	MEASURE Y	AGREE/CONFLICT
A,B	A MORE EQUAL THAN B	A MORE EQUAL THAN B	AGREE
A,C	A MORE EQUAL THAN C	A MORE EQUAL THAN C	AGREE
A,D	A MORE EQUAL THAN D	A MORE EQUAL THAN D	AGREE
B,C	B MORE EQUAL THAN C	B MORE EQUAL THAN C	AGREE
B,D	B MORE EQUAL THAN D	B LESS EQUAL THAN D	CONFLICT
C,D	C MORE EQUAL THAN D	C LESS EQUAL THAN D	CONFLICT

AC = AGREEMENT PERCENTAGE = 4/6 = .67

D. CALCULATION OF CONCORDANCE MEASURE

STATE	RANK (X)	RANK (Y)	Σ RANK	AVE Σ RANK*	$(\Sigma\ \text{RANK}-\overset{\text{AVE}}{\Sigma\ \text{RANK}})^2$
A	1	1	2	5	$(-3)^2 = 9$
B	2	3	5	5	0
C	3	4	7	5	$2^2 = 4$
D	4	2	6	5	$1^2 = 1$

*AVE Σ RANK = $\frac{1}{2} M (N + 1) = \frac{1}{2} (2) (4 + 1) = 5$

$$W = \frac{12\ (\Sigma\ (\Sigma\ \text{RANK} - \text{AVE}\ \Sigma\ \text{RANK})^2)}{M^2\ (N^3 - N)} = \frac{12 \times (9 + 4 + 1)}{4(64 - 4)} = \frac{168}{240} = .70$$

a difference is that one measure ranges from -1 to 1 compared to 0 to 1. Therefore the concordance measure will be higher than the Spearman rank correlation in all cases.[6] The Agreement-Conflict measure does not have to be greater the ρ and turns out to be greater than ρ in a little more than half of the cases in the examples to follow.

After the pairwise analysis of the equality and wealth neutrality measures, the second stage in the methodology consists of an examination of the measures in groups of three and four. In these cases the concordance measure is utilized to assess the extent of the agreement among the several equality measures.

In addition to the computation of the three statistics for the pairwise comparisons of equality measures and the concordance measures for groups of three and four equality measures, the rankings yielded by the pairs and groups of three and four equality and wealth neutrality measures are examined to determine the number of unambiguous rankings that can be derived from multiple equality measures. Unambiguous rankings occur when individual states or groups of states can be ranked unambiguously more or less equal or wealth neutral than other states or groups of states. In the example illustrated in Table V-1, State A can be ranked unambiguously more equal than States B, C, and D based on equality measures X and Y. However, no further unambiguous rankings are possible; thus, these four states can be unambiguously ranked in two groups for these two equality measures. If two measures rank a set of states in exactly opposite orders, the number of unambiguous rankings will be one. The number of unambiguous rankings can also be one when the rankings are very jumbled but not exactly opposite.

---

[6] Kendall, 1970, p. 95 shows that for M equality measures $\rho_{AVE} = \frac{MW-1}{M-1}$. In the case of 2 equality measures, $W = \rho/2 + .5$ so that W is always greater than or equal to ρ when $M = 2$.

The equality and wealth neutrality measures are examined in turn using the methodology described above in the remainder of this chapter.

A. Equality Measures

The analysis of the behavior of the equality measures when used to rank a number of states at one point in time is analyzed in four stages. First, the measures are examined pairwise and in groups of three and four using the unweighted pupil unit of analysis. Second, the measures are examined pairwise for the district unit of analysis and the results from the multiple rankings are briefly discussed. The comparison between the unweighted pupil and district units of analysis are presented in the third stage and the conclusions in the fourth stage.

Data are in hand for a total of 29 states. However, since this examination focuses on the use of a number of equality measures at one point in time, only states where date are available for 1975-76 are examined. This leaves a total of 23 states but since Illinois has multiple district types and only 62% of the pupils are in unit type districts, Illinois is not included in the sample. This leaves 22 states in the sample that is used to analyze the behavior of the equality measures in interstate comparisons.[7]

A 29 state sample can be constructed where one observation is included for every state. This sample would include the observations from the 22 states for 1975-76 plus Illinois-Unit, 1975-76; California-Unit, 1974-75; Colorado, 1974-75; Kansas, 1974-75; Maryland, 1976-77; Michigan, 1974-75; and Washington, 1974-75. A parallel analysis was carried out in this 29 state sample, however, only the results from the 22 state sample are presented and discussed since the results from the augmented sample are not different from those for the 22 state sample.

---

[7] Even though there are multiple district types in Missouri, since 98% of the pupils are in Unified districts, Missouri is included in the 22 state sample.

1. Assessment of Equality Measures Across States Using Unweighted Pupil Unit of Analysis

The specific question addressed in this part may be stated as follows:

> When a number of equality measures, computed using the unweighted pupil unit of analysis are used to rank a number of states from more to less equal at one point in time, do the rankings from the different equality measures agree?

In other words, if we examine the rankings that result from the application of two or more equality measures computed using the unweighted pupil unit of analysis to a set of states, at one point in time, will there be agreement among the rankings?

The rankings that result from the application of the equality measures to the sample of 22 states in 1975-76 (hereafter referred to as the 22 state sample) are compared pairwise using the three statistics described above and these are displayed in Table V-2. The Spearman rank correlations range from .6589 to .9910, the Agreement-Conflict measure from .7270 to .9740, and the concordance measure from .8295 to .9955. Since, given the sample size, all the rank correlations are highly significant, an arbitrary cutoff of .84 for the rank correlation and the Agreement-Conflict measure, .92 for the Concordance measure[8] can be used to isolate the pairs of measures that are more in agreement. If these criteria are used simultaneously, the following ten pairs of measures can be said to be more in agreement than the other pairs:

RANGE-VAR
RES RANGE-REL MN DEV
RES RANGE-VAR
RES RANGE-GINI
FED RR-REL MN DEV
FED RR-COEF VAR
FED RR-GINI
REL MN DEV-COEF VAR
REL MN DEV-GINI
COEF VAR-GINI

---

[8] When $\rho = .84$ for a pair of rankings, $W = .92$. See footnote 6.

TABLE V-2

MEASURES OF ASSOCIATION BETWEEN EQUALITY MEASURES USED ACROSS STATES IN 22 STATE SAMPLE (unweighted pupil unit of analysis)

	RES RANGE	FED RR	REL MN DEV	PERM VAR	VAR	COEF VAR	STD DEV LGS	GINI	MEASURES OF ASSOCIATION
RANGE	.7787	.6589	.6691	.6680	.8814	.7945	.6669	.6804	Spearman Rank Correlation(ρ_s)
	.7840	.7400	.7530	.7270	.8480	.8270	.7360	.7620	Agreement-Conflict Measure(AC)
	.8893	.8295	.8346	.8340	.9407	.8972	.8334	.8402	Concordance Measure (W)
RES RANGE	X	.8430	.8803	.7470	.9356	.8272	.7651	.8656	ρ_s
		.8130	.8570	.7710	.9090	.8180	.7970	.8400	AC
		.9215	.9401	.8735	.9678	.9136	.8826	.9328	W
FED RR		X	.8995	.7199	.7233	.8916	.6725	.9243	ρ_s
			.8570	.7710	.7620	.8610	.7530	.883	AC
			.9497	.8600	.8617	.9458	.8363	.9622	W
REL MN DEV			X	.7346	.8182	.9243	.7549	.9910	ρ_s
				.7920	.827	.892	.7920	.974	AC
				.8673	.9091	.9622	.8775	.9955	W
PERM VAR				X	.6770	.6623	.6702	.7199	ρ_s
					.7400	.7360	.7320	.7750	AC
					.8385	.8312	.8351	.8600	W
VAR					X	.8475	.7730	.8001	ρ_s
						.8230	.7840	.8010	AC
						.9238	.8865	.9001	W
COEF VAR						X	.7470	.9424	ρ_s
							.8050	.9180	AC
							.8735	.9712	W
STD DEV LGS							X	.7425	ρ_s
								.7920	AC
								.8713	W

In order to show the actual rankings so that the reader can assess independently whether or not the equality measures agree, four tables showing pairwise comparisons are presented. Tables V-3 and V-4 show the rankings for the coefficient of variation - Gini coefficient and relative mean deviation - Gini coefficient, respectively. These two measures are in substantial agreement as the concordance measure is above .97 and the Agreement-Conflict measure is over .90 in both cases.[9] The lines on the SUMMARY RANKING MATRIX show the unambiguous rankings which will be discussed shortly. Table V-5 shows the rankings for the Federal range ratio - standard deviation of logarithm equality measures, a case where there is relatively moderate agreement. Table V-5 shows that there is more agreement between the two measures for the more equal states. Finally Table V-6 shows the rankings that result from a pair of equality measure that do not agree, relative to the other pairs. The SUMMARY RANKING MATRIX shows that there are considerable differences despite the significant correlation and concordance measures.

A different way of assessing the agreement between the pairs of equality measures is to compute the number of unambiguous ranks yielded by each pair. Table V-3 shows, for example, that there are 5 unambiguous ranks for the COEF VAR-GINI combination and Table V-4 shows 17 unambiguous ranks for the REL MN DEV-GINI combination. Table V-7 displays the number of unambiguous rankings that result when all pairs of the nine equality measures are used to rank the 22 states. The minimum number of unambiguous ranks is one and an example where there is only one unambiguous rank is shown in Table V-6. It is interesting to note that although the rank correlation and concordance measures are significant for all pairs, only one unambiguous ranking is present in 18 out of 36 or 50% of the cases.

---

[9] The Agreement-Conflict measure is $\frac{(100 - \text{CONFLICT PCT})}{100}$. The CONFLICT PCT is shown on the tables.

TABLE V-3

```
          YEAR--1975                       YEAR--1975

      MEASURE--COEF VAR                 MEASURE--GINI

   UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL


   RANK   STATE          VALUE    RANK   STATE          VALUE
   ----   -----          -----    ----   -----          -----

     1    LOU           .09594      1    N M           .05286
     2    FLA           .09774      2    LOU           .05342
     3    W VA          .10293      3    FLA           .05507
     4    N C           .10758      4    W VA          .05528
     5    ALA           .12071      5    N C           .05792
     6    MINN          .12551      6    ALA           .06369
     7    N M           .13699      7    MINN          .06959
     8    MISS          .15400      8    MISS          .07856
     9    VERMT         .17316      9    S D           .08762
    10    CONN          .17840     10    VERMT         .09108
    11    S D           .17863     11    MO            .09168
    12    MO            .18228     12    N H           .09500
    13    MAINE         .18319     13    CONN          .09600
    14    N J           .19078     14    MAINE         .09828
    15    ORE           .19487     15    ORE           .10256
    16    S C           .20878     16    N J           .10300
    17    N H           .22056     17    TEXAS         .10395
    18    MASS          .22374     18    MASS          .11200
    19    TEXAS         .22451     19    S C           .11322
    20    KTY           .23779     20    N Y           .12208
    21    N Y           .24382     21    KTY           .12463
    22    GA            .33620     22    GA            .15600

     SUMMARY RANKING MATRIX
     ------- ------- ------
                                   SUM
 LOU        1     2                  3
 FLA        2     3                  5
 W VA       3     4                  7
 N M        7     1                  8
 N C        4     5                  9
 ALA        5     6                 11
 MINN       6     7                 13
 MISS       8     8                 16
 VERMT      9    10                 19
 S D       11     9                 20
 MO        12    11                 23
 CONN      10    13                 23
 MAINE     13    14                 27
 N H       17    12                 29
 ORE       15    15                 30
 N J       14    16                 30
 S C       16    19                 35
 MASS      18    18                 36
 TEXAS     19    17                 36
 KTY       20    21                 41
 N Y       21    20                 41
 GA        22    22                 44

      MEASURE -- UNIT           MEASURE -- UNIT            COMPARISONS   DISAGREEMENTS   CONFLICT PCT
      ---------------------     ---------------------      -----------   -------------   ------------

      COEF VAR    UNWGT PUPIL   GINI        UNWGT PUPIL            231              19            8.2


        S=  3440.00    W= .9712
```

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```
                                                          TABLE V-4

            YEAR--1975                           YEAR--1975

        MEASURE--REL MN DEV                   MEASURE--GINI

     UNIT OF ANAL--UNWGT PUPIL            UNIT OF ANAL--UNWGT PUPIL


   RANK   STATE              VALUE       RANK   STATE            VALUE
   ----   -----              -----       ----   -----            -----

      1   N M               .07592          1   N M             .05256
      2   LOU               .07963          2   LOU             .05392
      3   N C               .08378          3   FLA             .05507
      4   W VA              .08492          4   W VA            .05528
      5   FLA               .08560          5   N C             .05792
      6   ALA               .09478          6   ALA             .06869
      7   MINN              .09916          7   MINN            .06959
      8   MISS              .10907          8   MISS            .07856
      9   S D               .11365          9   S D             .08762
     10   VERMT             .12508         10   VERMT           .09100
     11   MO                .12925         11   MO              .09168
     12   N H               .13289         12   N H             .09500
     13   MAINE             .13606         13   CONN            .09800
     14   CONN              .13796         14   MAINE           .09820
     15   TEXAS             .14028         15   ORE             .10256
     16   ORE               .14328         16   N J             .10300
     17   N J               .14836         17   TEXAS           .10398
     18   MASS              .15829         18   MASS            .11200
     19   S C               .15998         19   S C             .11528
     20   N Y               .17608         20   N Y             .12200
     21   KTY               .19558         21   KTY             .12963
     22   GA                .21123         22   GA              .15600

     SUMMARY RANKING MATRIX
     ------- ------- ------
                                     SUM
 N M         1     1                   2
 LOU         2     2                   4
 N C         3     5                   8
 W VA        4     4                   8
 FLA         5     3                   8
 ALA         6     6                  12
 MINN        7     7                  14
 MISS        8     8                  16
 S D         9     9                  18
 VERMT      10    10                  20
 MO         11    11                  22
 N H        12    12                  24
 MAINE      13    14                  27
 CONN       14    13                  27
 ORE        16    15                  31
 TEXAS      15    17                  32
 N J        17    16                  33
 MASS       18    18                  36
 S C        19    19                  38
 N Y        20    20                  40
 KTY        21    21                  42
 GA         22    22                  44

 M E A S U R E -- U N I T    M E A S U R E -- U N I T    COMPARISONS   DISAGREEMENTS   CONFLICT PCT
 ------------------------    ------------------------    -----------   -------------   ------------

 REL MN DEV   UNWGT PUPIL    GINI          UNWGT PUPIL           231               6            2.6

      W= 4826.00   W= .9958
```

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```
                                        TABLE V-6

        YEAR--1975                          YEAR--1975

      MEASURE--PERM VAR                   MEASURE--COEF VAR

    UNIT OF ANAL--UNWGT PUPIL           UNIT OF ANAL--UNWGT PUPIL


   RANK   STATE          VALUE       RANK   STATE          VALUE
   ----   -----          -----       ----   -----          -----

      1   N M           .96182          1   LOU           .09599
      2   N C           .95892          2   FLA           .09774
      3   W VA          .95063          3   W VA          .10298
      4   FLA           .94676          4   N C           .10788
      5   MO            .93162          5   ALA           .12071
      6   ALA           .93152          6   MINN          .12581
      7   MINN          .92969          7   N M           .13679
      8   MISS          .92618          8   MISS          .15400
      9   KTY           .92353          9   VERMT         .17316
     10   MASS          .91002         10   CONN          .17840
     11   LOU           .90618         11   S D           .17863
     12   N H           .89467         12   MO            .18225
     13   CONN          .88999         13   MAINE         .18319
     14   TEXAS         .88372         14   N J           .19078
     15   VERMT         .88027         15   ORE           .19407
     16   MAINE         .87994         16   S C           .20678
     17   S D           .87444         17   N H           .22086
     18   N J           .87063         18   MASS          .22374
     19   S C           .86041         19   TEXAS         .22451
     20   GA            .83586         20   KTY           .23779
     21   N Y           .81589         21   N Y           .24302
     22   ORE           .80518         22   GA            .33620


      SUMMARY RANKING MATRIX
      ------- ------- ------
                                  SUM
 N C        2    4                  6
 W VA       3    3                  6
 FLA        4    2                  6
 N M        1    7                  8
 ALA        6    5                 11
 LOU       11    1                 12
 MINN       7    6                 13
 MISS       8    8                 16
 MO         5   12                 17
 CONN      13   10                 23
 VERMT     15    9                 24
 MASS      10   18                 28
 S D       17   11                 28
 MAINE     16   13                 29
 KTY        9   20                 29
 N H       12   17                 29
 N J       18   14                 32
 TEXAS     14   19                 33
 S C       19   16                 35
 ORE       22   15                 37
 GA        20   22                 42
 N Y       21   21                 42


 M E A S U R E -- U N I T   M E A S U R E -- U N I T    COMPARISONS   DISAGREEMENTS   CONFLICT PCT
 ------------------------   ------------------------    -----------   -------------   ------------

 PERM VAR     UNWGT PUPIL   COEF VAR     UNWGT PUPIL            231              61           26.4


      S=  2944.00    W= .8312
```

TABLE V-5

```
                  YEAR--1975                              YEAR--1975

            MEASURE--FED R R                        MEASURE--STD DEV LGS

        UNIT OF ANAL--UNWGT PUPIL               UNIT OF ANAL--UNWGT PUPIL


   RANK   STATE              VALUE       RANK   STATE              VALUE
   ----   -----              -----       ----   -----              -----

      1   FLA               .28570          1   LOU               .07492
      2   LOU               .31168          2   FLA               .07800
      3   W VA              .35620          3   W VA              .07977
      4   N M               .37258          4   N C               .10298
      5   ALA               .38117          5   N M               .11500
      6   N C               .42751          6   ALA               .11620
      7   MINN              .49779          7   MINN              .12207
      8   MO                .57309          8   MISS              .14188
      9   N H               .68607          9   MO                .16202
     10   VERMT             .69089         10   TEXAS             .18900
     11   MISS              .78670         11   S D               .19087
     12   ORE               .79847         12   S C               .19943
     13   CONN              .80188         13   ORE               .19985
     14   N J               .84529         14   MASS              .20074
     15   MAINE             .85510         15   MAINE             .20336
     16   S D               .87958         16   KTY               .21882
     17   KTY               .88407         17   N J               .23190
     18   TEXAS             .88760         18   N Y               .23408
     19   N Y              1.03770         19   GA                .34770
     20   S C              1.04910         20   CONN              .37020
     21   MASS             1.09770         21   VERMT             .43870
     22   GA               2.76880         22   N H               .54970

      SUMMARY RANKING MATRIX
      ------- ------- ------
                                        SUM
 LOU          2     1                     3
 FLA          1     2                     3
 W VA         3     3                     6
 N M          4     5                     9
 N C          6     4                    10
 ALA          5     6                    11
 MINN         7     7                    14
 MO           8     9                    17
 MISS        11     8                    19
 ORE         12    13                    25
 S D         16    11                    27
 TEXAS       18    10                    28
 MAINE       15    15                    30
 N J         14    17                    31
 N H          9    22                    31
 VERMT       10    21                    31
 S C         20    12                    32
 KTY         17    16                    33
 CONN        13    20                    33
 MASS        21    14                    35
 N Y         19    18                    37
 GA          22    19                    41


    M E A S U R E -- U N I T     M E A S U R E -- U N I T     COMPARISONS   DISAGREEMENTS   CONFLICT PCT
    ------------------------     ------------------------     -----------   -------------   ------------

    FED R R       UNWGT PUPIL    STD DEV LGS  UNWGT PUPIL             231              57           24.7


      S= 2962.00     W= .8363
```

TABLE V-7

NUMBER OF UNAMBIGUOUS RANKINGS FOR PAIRS OF EQUALITY MEASURES USED ACROSS STATES IN 22 STATE SAMPLE
(unweighted pupil unit of analysis)

	RES RANGE	FED RR	REL MN DEV	PERM VAR	VAR	COEF VAR	STD DEV LGS	GINI
RANGE	1	1	1	1	2	1	1	2
RES RANGE	X	2	2	1	7	1	2	2
FED RR		X	3	1	1	5	5	5
REL MN DEV			X	2	1	5	5	17
PERM VAR				X	1	1	1	2
VAR					X	1	1	1
COEF VAR						X	7	5
STD DEV LGS							X	1

The series of pairwise comparisons do show relatively more agreement among certain paris or groups of measures. For example there appears to be relatively more agreement among the coefficient of variation, relative mean deviation and Gini coefficient than among any other set of three measures. Furthermore, if the standard deviation of logarithms and the Federal range ratio are added to this group, the agreement among the ten pairs in this group of five is relatively greater than among the other 26 pairs of the nine equality measures.

The agreement among the equality measures when used for interstate rankings can be assessed further by examining the agreement among more than two equality measures. Of course, the number of combinations of three or more equality measures, selected from nine, is quite large so that only a selected sample of the multiple comparisons are discussed here.

Tables V-8 through B-16 display the rankings resulting from the application of groups of three and four equality measures to the 22 state sample and a summary of the concordance measures and number of unambiguous rankings are listed in Table V-17. These tables reinforce the conclusion that the agreement among the five measures discussed above is relatively substantial. The concordance measures are uniformly close to .9 or above, and two or more unambiguous rankings can be obtained in every case. The existence of more than one unambiguous ranking when more than two equality measures are utilized is noteworthy since over half the equality meausres taken two at a time result in only one unambiguous ranking.

Thus it appears that there are differences among the nine equality measures when they are used to rank a set of states from most equal to least equal when the measures are computed using the unweighted pupil unit of analysis. However, there are groups of measures that show relatively more

TABLE V-8

```
      YEAR--1975                      YEAR--1975                      YEAR--1975

   MEASURE.-COEF VAR              MEASURE--STD DEV LGS             MEASURE--GINI

UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL


RANK   STATE         VALUE      RANK   STATE         VALUE      RANK   STATE         VALUE
----   -----         -----      ----   -----         -----      ----   -----         -----

   1   LOU          .09594         1   LOU          .09492         1   N M          .05256
   2   FLA          .09774         2   FLA          .09800         2   LOU          .05342
   3   W VA         .10293         3   W VA         .09977         3   FLA          .05507
   4   N C          .10758         4   N C          .10298         4   W VA         .05520
   5   ALA          .12071         5   N M          .11500         5   N C          .05792
   6   MINN         .12551         6   ALA          .11620         6   ALA          .06569
   7   N M          .13699         7   MINN         .12207         7   MINN         .06989
   8   MISS         .15400         8   MISS         .14153         8   MISS         .07836
   9   VERMT        .17816         9   MO           .16202         9   S D          .08762
  10   CONN         .17840        10   TEXAS        .18900        10   VERMT        .09100
  11   S D          .17863        11   S D          .19007        11   MO           .09163
  12   MO           .18228        12   S C          .19948        12   N H          .09500
  13   MAINE        .18319        13   ORE          .19958        13   CONN         .09800
  14   N J          .19078        14   MASS         .20094        14   MAINE        .09820
  15   ORE          .19407        15   MAINE        .20356        15   ORE          .10256
  16   S C          .20878        16   KTY          .21052        16   N J          .10300
  17   N H          .22056        17   N J          .23190        17   TEXAS        .10395
  18   MASS         .22374        18   N Y          .23400        18   MASS         .11200
  19   TEXAS        .22451        19   GA           .34770        19   S C          .11322
  20   KTY          .23779        20   CONN         .37020        20   N Y          .12200
  21   N Y          .24302        21   VERMT        .48370        21   KTY          .12463
  22   GA           .33628        22   N H          .54970        22   GA           .13600

      SUMMARY RANKING MATRIX
      ------- ------- ------
                                 SUM
LOU        1     1     2           4
FLA        2     2     3           7
W VA       3     3     4          10
N C        4     4     5          13
N M        7     5     1          13
ALA        5     6     6          17
MINN       6     7     7          20
MISS       8     8     8          24
S D       11    11     9          31
MO        12     9    11          32
VERMT      9    21    10          40
MAINE     13    15    14          42
ORE       15    13    15          43
CONN      10    20    13          43
TEXAS     19    10    17          46
S C       16    12    19          47
N J       14    17    16          47
MASS      18    14    18          50
N H       17    22    12          51
KTY       20    16    21          57
N Y       21    18    20          59
GA        22    19    22          63


MEASURE--UNIT            MEASURE--UNIT              COMPARISONS   DISAGREEMENTS   CONFLICT PCT
---------------------    ----------------------     -----------   -------------   ------------

COEF VAR    UNWGT PUPIL  STD DEV LGS  UNWGT PUPIL           231              45           19.5
COEF VAR    UNWGT PUPIL  GINI         UNWGT PUPIL           231              19            8.2
STD DEV LGS UNWGT PUPIL  GINI         UNWGT PUPIL           231              48           20.8


   S=  6963.50    W= .8758
```

```
                                              TABLE V-9
        YEAR--1975                         YEAR--1975                          YEAR--1975

     MEASURE--REL MN DEV               MEASURE--STD DEV LGS                MEASURE--COEF VAR

  UNIT OF ANAL--UNWGT PUPIL          UNIT OF ANAL--UNWGT PUPIL          UNIT OF ANAL--UNWGT PUPIL


 RANK   STATE           VALUE      RANK   STATE           VALUE      RANK   STATE           VALUE
 ----   -----           -----      ----   -----           -----      ----   -----           -----

    1   N M            .07592         1   LOU            .09492         1   LOU            .09594
    2   LOU            .07963         2   FLA            .09800         2   FLA            .09774
    3   N C            .08370         3   W VA           .09977         3   W VA           .10293
    4   W VA           .08492         4   N C            .10296         4   N C            .10758
    5   FLA            .08560         5   N M            .11300         5   ALA            .12071
    6   ALA            .09493         6   ALA            .11620         6   MINN           .12581
    7   MINN           .09916         7   MINN           .12207         7   N M            .13699
    8   MISS           .10907         8   MISS           .14133         8   MISS           .15900
    9   S D            .11365         9   MO             .16282         9   VERMT          .17316
   10   VERMT          .12508        10   TEXAS          .18900        10   CONN           .17840
   11   MO             .12925        11   S D            .19087        11   S D            .17863
   12   N H            .13289        12   S C            .19948        12   MO             .18223
   13   MAINE          .13606        13   ORE            .19985        13   MAINE          .18519
   14   CONN           .13796        14   MASS           .20099        14   N J            .19078
   15   TEXAS          .14020        15   MAINE          .20336        15   ORE            .19487
   16   ORE            .14320        16   KTY            .21852        16   S C            .20078
   17   N J            .14836        17   N J            .23190        17   N H            .22056
   18   MASS           .15029        18   N Y            .24900        18   MASS           .22374
   19   S C            .15996        19   GA             .34770        19   TEXAS          .22951
   20   N Y            .17688        20   CONN           .37020        20   KTY            .23779
   21   KTY            .19356        21   VERMT          .43370        21   N Y            .24382
   22   GA             .21123        22   N H            .54970        22   GA             .33620


      SUMMARY RANKING MATRIX
      ------- ------- ------
                                          SUM
 LOU        2      1      1                 4
 FLA        5      2      2                 9
 W VA       4      3      3                10
 N C        3      4      4                11
 N M        1      5      7                13
 ALA        6      6      5                17
 MINN       7      7      6                20
 MISS       8      8      8                24
 S D        9     11     11                31
 MO        11      9     12                32
 VERMT     10     21      9                40
 MAINE     13     15     13                41
 TEXAS     15     10     19                44
 ORE       16     13     15                44
 CONN      14     20     10                44
 S C       19     12     16                47
 N J       17     17     14                48
 MASS      18     14     18                50
 N H       12     22     17                51
 KTY       21     16     20                57
 N Y       20     18     21                59
 GA        22     19     22                63

                  M E A S U R E -- U N I T    M E A S U R E -- U N I T      COMPARISONS   DISAGREEMENTS   CONFLICT PCT
                  ------------------------    ------------------------      -----------   -------------   ------------

                  REL MN DEV    UNWGT PUPIL   STD DEV LGS   UNWGT PUPIL             231              40           20.0
                  REL MN DEV    UNWGT PUPIL   COEF VAR      UNWGT PUPIL             231              25           10.8
                  STD DEV LGS   UNWGT PUPIL   COEF VAR      UNWGT PUPIL             231              45           19.5

                     S=  6953.50    W= .8728
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TABLE V-10

```
     YEAR--1976                         YEAR--1976                        YEAR--1976

   MEASURE.-REL MN DEV                MEASURE--STD DEV LOG               MEASURE--GINI

 UNIT OF ANAL--UNWGT PUPIL          UNIT OF ANAL--UNWGT PUPIL         UNIT OF ANAL--UNWGT PUPIL


 RANK   STATE          VALUE       RANK   STATE          VALUE       RANK   STATE          VALUE
 ----   -----          -----       ----   -----          -----       ----   -----          -----

    1   N M           .07592          1   LOU           .09492          1   N M           .05256
    2   LOU           .07963          2   FLA           .09800          2   LOU           .05392
    3   N C           .08370          3   W VA          .09977          3   FLA           .05507
    4   W VA          .08492          4   N C           .10298          4   W VA          .05520
    5   FLA           .08560          5   N M           .11300          5   N C           .05792
    6   ALA           .09493          6   ALA           .11620          6   ALA           .06569
    7   MINN          .09916          7   MINN          .12207          7   MINN          .06759
    8   MISS          .10907          8   MISS          .14133          8   MISS          .07056
    9   S D           .11560          9   MO            .16202          9   S D           .08762
   10   VERMT         .12500         10   TEXAS         .18900         10   VERMT         .09100
   11   MO            .12925         11   S D           .19087         11   MO            .09163
   12   N H           .13289         12   S C           .19943         12   N H           .09500
   13   MAINE         .13606         13   ORE           .19950         13   CONN          .09800
   14   CONN          .13796         14   MASS          .20079         14   MAINE         .09820
   15   TEXAS         .14020         15   MAINE         .20346         15   ORE           .10256
   16   ORE           .14320         16   KTY           .21852         16   N J           .10300
   17   N J           .14836         17   N J           .23190         17   TEXAS         .10393
   18   MASS          .15029         18   N Y           .23400         18   MASS          .11200
   19   S C           .15990         19   GA            .34770         19   S C           .11322
   20   N Y           .17600         20   CONN          .37820         20   N Y           .12200
   21   KTY           .19550         21   VERMT         .43378         21   KTY           .12963
   22   GA            .21123         22   N H           .54970         22   GA            .15680


     SUMMARY RANKING MATRIX
     ------- ------- ------
                                          SUM
LOU         2      1      2                 5
N M         1      5      1                 7
FLA         5      2      3                10
W VA        4      3      4                11
N C         3      4      5                12
ALA         6      6      6                18
MINN        7      7      7                21
MISS        8      8      8                24
S D         9     11      9                29
MO         11      9     11                31
VLRMT      10     21     10                41
MAINE      13     15     14                42
TEXAS      15     10     17                42
ORE        16     13     15                44
N H        12     22     12                46
CONN       14     20     13                47
MASS       18     14     18                50
S C        19     12     19                50
N J        17     17     16                50
KTY        21     16     21                58
N Y        20     18     20                58
GA         22     19     22                63

         M E A S U R E -- U N I T   M E A S U R E -- U N I T    COMPARISONS   DISAGREEMENTS   CONFLICT PCT
         ------------------------   ------------------------    -----------   -------------   ------------

         REL MN DEV   UNWGT PUPIL   STD DEV LOG  UNWGT PUPIL            231              48           20.8
         REL MN DEV   UNWGT PUPIL   GINI         UNWGT PUPIL            231               6            2.6
         STD DEV LOG  UNWGT PUPIL   GINI         UNWGT PUPIL            231              48           20.8

             S=  7063.50    W= .8864
```

TABLE V-11

YEAR--1978
MEASURE--REL MN DEV
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	.07592
2	LOU	.07963
3	N C	.08370
4	W VA	.08492
5	FLA	.08560
6	ALA	.09493
7	MINN	.09916
8	MISS	.10907
9	S D	.11365
10	VERMT	.12808
11	MO	.12925
12	N H	.13209
13	MAINE	.13606
14	CONN	.13796
15	TEXAS	.14020
16	ORE	.14320
17	N J	.14836
18	MASS	.15027
19	S C	.15990
20	N Y	.17688
21	KTY	.19858
22	GA	.21128

YEAR--1978
MEASURE--COEF VAR
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	LOU	.09594
2	FLA	.09774
3	W VA	.10293
4	N C	.10700
5	ALA	.12071
6	MINN	.12581
7	N M	.13699
8	MISS	.15400
9	VERMT	.17316
10	CONN	.17640
11	S D	.17863
12	MO	.18228
13	MAINE	.18319
14	N J	.19078
15	ORE	.19407
16	S C	.20878
17	N H	.22086
18	MASS	.22379
19	TEXAS	.22481
20	KTY	.23779
21	N Y	.24302
22	GA	.33620

YEAR--1978
MEASURE--GINI
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	.05236
2	LOU	.05342
3	FLA	.05507
4	W VA	.05520
5	N C	.05792
6	ALA	.06569
7	MINN	.06759
8	MISS	.07056
9	S D	.08762
10	VERMT	.09100
11	MO	.09163
12	N H	.09300
13	CONN	.09600
14	MAINE	.09820
15	ORE	.10256
16	N J	.10400
17	TEXAS	.10598
18	MASS	.11200
19	S C	.11322
20	N Y	.12290
21	KTY	.12963
22	GA	.15606

SUMMARY RANKING MATRIX

				SUM
LOU	2	1	2	5
N M	1	7	1	9
FLA	5	2	3	10
W VA	4	3	4	11
N C	3	4	5	12
ALA	6	5	6	17
MINN	7	6	7	20
MISS	8	8	8	24
S D	9	11	9	29
VERMT	10	9	10	29
MO	11	12	11	34
CONN	14	10	13	37
MAINE	13	13	14	40
N H	12	17	12	41
ORE	16	15	15	46
N J	17	14	16	47
TEXAS	15	19	17	51
MASS	18	18	18	54
S C	19	16	19	54
N Y	20	21	20	61
KTY	21	20	21	62
GA	22	22	22	66

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
REL MN DEV	UNWGT PUPIL	COEF VAR	UNWGT PUPIL	231	23	10.0
REL MN DEV	UNWGT PUPIL	GINI	UNWGT PUPIL	231	6	2.6
COEF VAR	UNWGT PUPIL	GINI	UNWGT PUPIL	231	19	8.2

S= 7717.00 W= .9604

TABLE V-12

YEAR--1975			YEAR--1975			YEAR--1975		
MEASURE--FED R R			MEASURE--GINI			MEASURE--COEF VAR		
UNIT OF ANAL--UNWGT PUPIL			UNIT OF ANAL--UNWGT PUPIL			UNIT OF ANAL--UNWGT PUPIL		
RANK	STATE	VALUE	RANK	STATE	VALUE	RANK	STATE	VALUE
1	FLA	.30570	1	N M	.05286	1	LOU	.09594
2	LOU	.31165	2	LOU	.05392	2	FLA	.09774
3	W VA	.35620	3	FLA	.05507	3	W VA	.10298
4	N M	.37250	4	W VA	.05528	4	N C	.10780
5	ALA	.38119	5	N C	.05792	5	ALA	.12371
6	N C	.42951	6	ALA	.06569	6	MINN	.12551
7	MINN	.49779	7	MINN	.06959	7	N M	.13699
8	MO	.57389	8	MISS	.07856	8	MISS	.15908
9	N H	.60687	9	S D	.08762	9	VERMT	.17816
10	VERMT	.69889	10	VERMT	.09100	10	CONN	.17848
11	MISS	.78678	11	MO	.09168	11	S D	.17863
12	ORE	.79847	12	N H	.09500	12	MO	.18223
13	CONN	.80188	13	CONN	.09808	13	MAINE	.18319
14	N J	.84529	14	MAINE	.09820	14	N J	.19078
15	MAINE	.85510	15	ORE	.10206	15	ORE	.19487
16	S D	.87952	16	N J	.10500	16	S C	.20878
17	KTY	.88407	17	TEXAS	.10598	17	N H	.22056
18	TEXAS	.88760	18	MASS	.11200	18	MASS	.22374
19	N Y	1.03770	19	S C	.11322	19	TEXAS	.22451
20	S C	1.04910	20	N Y	.12200	20	KTY	.23779
21	MASS	1.09770	21	KTY	.12468	21	N Y	.24302
22	GA	2.76350	22	GA	.15680	22	GA	.33620

SUMMARY RANKING MATRIX

				SUM
LOU	2	2	1	5
FLA	1	3	2	6
W VA	3	4	3	10
N M	4	1	7	12
N C	6	5	4	15
ALA	5	6	5	16
MINN	7	7	6	20
MISS	11	8	8	27
VERMT	10	10	9	29
MO	8	11	12	31
S D	16	9	11	36
CONN	13	13	10	36
N H	9	12	17	38
MAINE	15	14	13	42
ORE	12	15	15	42
N J	14	16	14	44
TEXAS	18	17	19	54
S C	20	19	16	55
MASS	21	18	18	57
KTY	17	21	20	58
N Y	19	20	21	60
GA	22	22	22	66

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
FED R R	UNWGT PUPIL	GINI	UNWGT PUPIL	231	27	11.7
FED R R	UNWGT PUPIL	COEF VAR	UNWGT PUPIL	231	32	13.9
GINI	UNWGT PUPIL	COEF VAR	UNWGT PUPIL	231	19	8.2

S= 7541.50 W= .9463

TABLE V-13

YEAR--1975			YEAR--1975			YEAR--1975		
MEASURE--FED R R			MEASURE--GINI			MEASURE--REL MN DEV		
UNIT OF ANAL--UNWGT PUPIL			UNIT OF ANAL--UNWGT PUPIL			UNIT OF ANAL--UNWGT PUPIL		
RANK	STATE	VALUE	RANK	STATE	VALUE	RANK	STATE	VALUE
1	FLA	.30578	1	N M	.05246	1	N M	.07592
2	LOU	.31165	2	LOU	.05392	2	LOU	.07963
3	W VA	.35620	3	FLA	.05507	3	N C	.08370
4	N M	.37250	4	W VA	.05520	4	W VA	.08492
5	ALA	.38119	5	N C	.05792	5	FLA	.08560
6	N C	.42951	6	ALA	.06567	6	ALA	.09493
7	MINN	.49779	7	MINN	.06959	7	MINN	.09916
8	MO	.57509	8	MISS	.07506	8	MISS	.10907
9	N H	.60607	9	S D	.08762	9	S D	.11365
10	VERMT	.69009	10	VERMT	.09100	10	VERMT	.12508
11	MISS	.78670	11	MO	.09163	11	MO	.12925
12	ORE	.79047	12	N H	.09500	12	N H	.13269
13	CONN	.80103	13	CONN	.09600	13	MAINE	.13606
14	N J	.84529	14	MAINE	.09620	14	CONN	.13796
15	MAINE	.85510	15	ORE	.10256	15	TEXAS	.14026
16	S D	.87952	16	N J	.10300	16	ORE	.14320
17	KTY	.88487	17	TEXAS	.10396	17	N J	.14836
18	TEXAS	.88760	18	MASS	.11200	18	MASS	.15829
19	N Y	1.03770	19	S C	.11322	19	S C	.15990
20	S C	1.04910	20	N Y	.12200	20	N Y	.17608
21	MASS	1.09770	21	KTY	.12463	21	KTY	.19456
22	GA	2.76880	22	GA	.15600	22	GA	.21123

SUMMARY RANKING MATRIX

				SUM
LOU	2	2	2	6
N M	4	1	1	6
FLA	1	3	5	9
W VA	3	4	4	11
N C	6	5	3	14
ALA	5	6	6	17
MINN	7	7	7	21
MISS	11	8	8	27
MO	8	11	11	30
VERMT	10	10	10	30
N H	9	12	12	33
S D	16	9	9	34
CONN	13	13	14	40
MAINE	15	14	13	42
ORE	12	15	16	43
N J	14	16	17	47
TEXAS	18	17	15	50
MASS	21	18	18	57
S C	20	19	19	58
KTY	17	21	21	59
N Y	19	20	20	59
GA	22	22	22	66

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
FED R R	UNWGT PUPIL	GINI	UNWGT PUPIL	231	27	11.7
FED R R	UNWGT PUPIL	REL MN DEV	UNWGT PUPIL	231	33	14.3
GINI	UNWGT PUPIL	REL MN DEV	UNWGT PUPIL	231	6	2.6

S= 7641.50   W= .9588

```
                                                           TABLE V-14

          YEAR--1975                            YEAR--1975                            YEAR--1975                            YEAR--1975

      MEASURE.-COEF VAR                    MEASURE--STD DEV LGS                    MEASURE--GINI                      MEASURE--REL MN DEV

   UNIT OF ANAL--UNWGT PUPIL              UNIT OF ANAL--UNWGT PUPIL              UNIT OF ANAL--UNWGT PUPIL              UNIT OF ANAL--UNWGT PUPIL


 RANK     STATE             VALUE     RANK     STATE             VALUE     RANK     STATE             VALUE     RANK     STATE             VALUE
 ----     -----             -----     ----     -----             -----     ----     -----             -----     ----     -----             -----

    1     LOU              .09594        1     LOU              .09492        1     N M              .05236        1     N M              .07892
    2     FLA              .09774        2     FLA              .09800        2     LOU              .05342        2     LOU              .07965
    3     W VA             .10293        3     W VA             .09977        3     FLA              .05507        3     N C              .08370
    4     N C              .10758        4     N C              .10298        4     W VA             .05520        4     W VA             .08492
    5     ALA              .12071        5     N M              .11300        5     N C              .05792        5     FLA              .08860
    6     MINN             .12531        6     ALA              .11620        6     ALA              .06369        6     ALA              .09498
    7     N M              .13699        7     MINN             .12207        7     MINN             .06959        7     MINN             .09916
    8     MISS             .15400        8     MISS             .14135        8     MISS             .07856        8     MISS             .10907
    9     VERMT            .17316        9     MO               .16282        9     S D              .08762        9     S D              .11365
   10     CONN             .17840       10     TEXAS            .18900       10     VERMT            .09100       10     VERMT            .12800
   11     S D              .17863       11     S D              .19087       11     MO               .09163       11     MO               .12925
   12     MO               .18228       12     S C              .19943       12     N H              .09500       12     N H              .13289
   13     MAINE            .18319       13     ORE              .19985       13     CONN             .09800       13     MAINE            .13606
   14     N J              .19078       14     MASS             .20094       14     MAINE            .09828       14     CONN             .13796
   15     ORE              .19407       15     MAINE            .20336       15     ORE              .10256       15     TEXAS            .14028
   16     S C              .20878       16     KTY              .21802       16     N J              .10300       16     ORE              .14828
   17     N H              .22056       17     N J              .23190       17     TEXAS            .10395       17     N J              .14836
   18     MASS             .22374       18     N Y              .23400       18     MASS             .11200       18     MASS             .15029
   19     TEXAS            .22451       19     GA               .34778       19     S C              .11822       19     S C              .15990
   20     KTY              .23779       20     CONN             .37820       20     N Y              .12200       20     N Y              .17608
   21     N Y              .24382       21     VERMT            .48370       21     KTY              .12463       21     KTY              .19858
   22     GA               .33620       22     N H              .54970       22     GA               .15600       22     GA               .21128

     SUMMARY RANKING MATRIX
     ------- ------- ------
                                      SUM
LOU         1      1      2      2      6
FLA         2      2      3      5     12
W VA        3      3      4      4     14
N M         7      5      1      1     14
N C         4      4      5      3     16
ALA         5      6      6      6     23
MINN        6      7      7      7     27
MISS        8      8      8      8     32
S D        11     11      9      9     40
MO         12      9     11     11     43
VERMT       9     21     10     10     50
MAINE      13     15     14     13     55
CONN       10     20     13     14     57
ORE        15     13     15     16     59
TEXAS      19     10     17     15     61
N H        17     22     12     12     63
N J        14     17     16     17     64
S C        16     12     19     19     66
MASS       18     14     18     18     68
KTY        20     16     21     21     78
N Y        21     18     20     20     79
GA         22     19     22     22     85

                                  MEASURE -- UNIT         MEASURE -- UNIT            COMPARISONS   DISAGREEMENTS   CONFLICT PCT
                                  ---------------------   ----------------------     -----------   -------------   ------------

                                  COEF VAR     UNWGT PUPIL  STD DEV LGS  UNWGT PUPIL         231              45           19.5
                                  COEF VAR     UNWGT PUPIL  GINI         UNWGT PUPIL         231              19            8.2
                                  COEF VAR     UNWGT PUPIL  REL MN DEV   UNWGT PUPIL         231              25           10.8
                                  STD DEV LGS  UNWGT PUPIL  GINI         UNWGT PUPIL         231              48           20.8
                                  STD DEV LGS  UNWGT PUPIL  REL MN DEV   UNWGT PUPIL         231              48           20.8
                                  GINI         UNWGT PUPIL  REL MN DEV   UNWGT PUPIL         231               6            2.6


                                    S= 12578.00    W= .8878
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TABLE V-15

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       YEAR--1975                       YEAR--1975                       YEAR--1975                       YEAR--1975

   MEASURE--FED R R                MEASURE--REL MN DEV               MEASURE--COEF VAR                  MEASURE--GINI

UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL


RANK  STATE         VALUE      RANK  STATE         VALUE      RANK  STATE         VALUE      RANK  STATE         VALUE
----  -----         -----      ----  -----         -----      ----  -----         -----      ----  -----         -----

   1  FLA          .30570         1  N M          .07372         1  LOU          .09094         1  N M          .05236
   2  LOU          .31165         2  LOU          .07963         2  FLA          .09774         2  LOU          .05342
   3  W VA         .35620         3  N C          .08378         3  W VA         .10293         3  FLA          .05407
   4  N M          .37280         4  W VA         .08472         4  N C          .10758         4  W VA         .05520
   5  ALA          .40119         5  FLA          .08560         5  ALA          .12071         5  N C          .05792
   6  N C          .42951         6  ALA          .09473         6  MINN         .12581         6  ALA          .06869
   7  MINN         .49779         7  MINN         .09916         7  N M          .13699         7  MINN         .06959
   8  MO           .57304         8  MISS         .10907         8  MISS         .15400         8  MISS         .07856
   9  N H          .60607         9  S D          .11368         9  VERMT        .17016         9  S D          .08762
  10  VERMT        .69889        10  VERMT        .12508        10  CONN         .17040        10  VERMT        .09100
  11  MISS         .78678        11  MO           .12928        11  S D          .17063        11  MO           .09163
  12  ORE          .79847        12  N H          .13289        12  MO           .18223        12  N H          .09500
  13  CONN         .80103        13  MAINE        .13606        13  MAINE        .18419        13  CONN         .09800
  14  N J          .84529        14  CONN         .13796        14  N J          .19078        14  MAINE        .09820
  15  MAINE        .85510        15  TEXAS        .14028        15  ORE          .19407        15  ORE          .10256
  16  S D          .87952        16  ORE          .14320        16  S C          .20078        16  N J          .10300
  17  KTY          .88907        17  N J          .14836        17  N H          .22056        17  TEXAS        .10393
  18  TEXAS        .98760        18  MASS         .15029        18  MASS         .22374        18  MASS         .11200
  19  N Y         1.03770        19  S C          .15990        19  TEXAS        .22451        19  S C          .11322
  20  S C         1.04910        20  N Y          .17680        20  KTY          .23779        20  N Y          .12200
  21  MASS        1.09770        21  KTY          .19388        21  N Y          .24302        21  KTY          .12968
  22  GA          2.76380        22  GA           .21128        22  GA           .33620        22  GA           .15680

        SUMMARY RANKING MATRIX
        ------- ------- ------
                                         SUM
LOU            2     2     1     2         7
FLA            1     5     2     3        11
N M            4     1     7     1        13
W VA           3     4     3     4        14
N C            6     3     4     5        18
ALA            5     6     5     6        22
MINN           7     7     6     7        27
MISS          11     8     8     8        35
VERMT         10    10     9    10        39
MO             8    11    12    11        42
S D           16     9    11     9        45
N H            9    12    17    12        50
CONN          13    14    10    13        50
MAINE         15    13    13    14        55
ORE           12    16    15    15        58
N J           14    17    14    16        61
TEXAS         18    15    19    17        69
S C           20    19    16    19        74
MASS          21    18    18    18        75
KTY           17    21    20    21        79
N Y           19    20    21    20        80
GA            22    22    22    22        88


      M E A S U R E -- U N I T     M E A S U R E -- U N I T     COMPARISONS   DISAGREEMENTS   CONFLICT PCT
      ------------------------     ------------------------     -----------   -------------   ------------

      FED R R       UNWGT PUPIL    REL MN DEV    UNWGT PUPIL            231              45           19.5
      FED R R       UNWGT PUPIL    COEF VAR      UNWGT PUPIL            231              32           13.9
      FED R R       UNWGT PUPIL    GINI          UNWGT PUPIL            231              27           11.7
      REL MN DEV    UNWGT PUPIL    COEF VAR      UNWGT PUPIL            231              25           10.8
      REL MN DEV    UNWGT PUPIL    GINI          UNWGT PUPIL            231               6            2.6
      COEF VAR      UNWGT PUPIL    GINI          UNWGT PUPIL            231              19            8.2

          S= 10912.00    W= .9466
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TABLE V-16

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        YEAR--1975                        YEAR--1975                        YEAR--1975                        YEAR--1975

   MEASURE.-COEF VAR                MEASURE--STD DEV LGS                  MEASURE--GINI                    MEASURE--FED R R

UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL

RANK   STATE        VALUE        RANK   STATE        VALUE        RANK   STATE        VALUE        RANK   STATE        VALUE
----   -----        -----        ----   -----        -----        ----   -----        -----        ----   -----        -----

   1   LOU         .09594           1   LOU         .09492           1   N M         .05256           1   FLA         .30870
   2   FLA         .09779           2   FLA         .09800           2   LOU         .05342           2   LOU         .31168
   3   W VA        .10298           3   W VA        .09977           3   FLA         .05387           3   W VA        .35620
   4   N C         .10758           4   N C         .10290           4   W VA        .05520           4   N M         .37250
   5   ALA         .12071           5   N M         .11500           5   N C         .05792           5   ALA         .38119
   6   MINN        .12551           6   ALA         .11620           6   ALA         .06569           6   N C         .42951
   7   N M         .13699           7   MINN        .12207           7   MINN        .06959           7   MINN        .49779
   8   MISS        .15400           8   MISS        .14148           8   MISS        .07856           8   MO          .57804
   9   VERMT       .17516           9   MO          .16202           9   S D         .08762           9   N H         .60607
  10   CONN        .17840          10   TEXAS       .18908          10   VERMT       .09100          10   VERMT       .69889
  11   S D         .17863          11   S D         .19087          11   MO          .09163          11   MISS        .78678
  12   MO          .18223          12   S C         .19948          12   N H         .09500          12   ORE         .79847
  13   MAINE       .18319          13   ORE         .19985          13   CONN        .09800          13   CONN        .80185
  14   N J         .19078          14   MASS        .20094          14   MAINE       .09820          14   N J         .84529
  15   ORE         .19407          15   MAINE       .20336          15   ORE         .10256          15   MAINE       .85810
  16   S C         .20878          16   KTY         .21882          16   N J         .10380          16   S D         .87982
  17   N H         .22056          17   N J         .23190          17   TEXAS       .10395          17   KTY         .86807
  18   MASS        .22374          18   N Y         .23400          18   MASS        .11200          18   TEXAS       .88760
  19   TEXAS       .22451          19   GA          .34770          19   S C         .11322          19   N Y        1.03770
  20   KTY         .23779          20   CONN        .37820          20   N Y         .12200          20   S C        1.04910
  21   N Y         .24382          21   VERMT       .48870          21   KTY         .12963          21   MASS       1.09770
  22   GA          .33620          22   N H         .54970          22   GA          .18600          22   GA         2.76830

     SUMMARY RANKING MATRIX
     ------- ------- ------
                                     SUM
LOU        1     1     2     2         6
FLA        2     2     3     1         8
W VA       3     3     4     3        13
N M        7     5     1     4        17
N C        4     4     5     6        19
ALA        5     6     6     5        22
MINN       6     7     7     7        27
MISS       8     8     8    11        35
MO        12     9    11     8        40
S D       11    11     9    16        47
VERMT      9    21    10    10        50
ORE       15    13    15    12        55
CONN      10    20    13    13        56
MAINE     13    15    14    15        57
N H       17    22    12     9        60
N J       14    17    16    14        61
TEXAS     19    10    17    18        64
S C       16    12    19    20        67
MASS      18    14    18    21        71
KTY       20    16    21    17        74
N Y       21    18    20    19        78
GA        22    19    22    22        85

                              M E A S U R E -- U N I T       M E A S U R E -- U N I T       COMPARISONS   DISAGREEMENTS   CONFLICT PCT
                              ------------------------       ------------------------       -----------   -------------   ------------

                              COEF VAR      UNWGT PUPIL      STD DEV LGS   UNWGT PUPIL              231              45           19.5
                              COEF VAR      UNWGT PUPIL      GINI          UNWGT PUPIL              231              19            8.2
                              COEF VAR      UNWGT PUPIL      FED R R       UNWGT PUPIL              231              32           13.9
                              STD DEV LGS   UNWGT PUPIL      GINI          UNWGT PUPIL              231              48           20.8
                              STD DEV LGS   UNWGT PUPIL      FED R R       UNWGT PUPIL              231              57           24.7
                              GINI          UNWGT PUPIL      FED R R       UNWGT PUPIL              231              27           11.7

                                 S= 12256.00   W= .8650
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TABLE V-17

CONCORDANCE MEASURES AND NUMBER OF UNAMBIGUOUS RANKINGS FOR GROUPS OF EQUALITY MEASURES, 22 STATE SAMPLE

(unweighted pupil unit of analysis)

	EQUALITY MEASURES						
TABLE	COEF VAR	ST DEV LGS	GINI	REL MN DEV	FED RR	W	NUMBER OF UNAMBIGUOUS RANKS
V-8	X	X	X			.8738	3
V-9	X	X		X		.8725	3
V-10		X	X	X		.8863	5
V-11	X		X	X		.9684	5
V-12	X		X		X	.9463	3
V-13			X	X	X	.9588	4
V-14	X	X	X	X		.8878	3
V-15	X		X	X	X	.9466	3
V-16	X	X	X		X	.8650	2

agreement and yield more than one unambiguous ranking when used in multiples of three and four. For example, the coefficient of variation, standard deviation of logarithms, Gini coefficient, and relative mean deviation can be used to rank the 22 states and a clear determination can be made that certain of the states are more equal than others on all four measures. However, there are enough contradictions among all nine measures so that if more than one unambiguous ranking is desired, certain value judgments will have to be accepted so that certain measures are eliminated from the set of nine equality measures.

2. Assessment of Equality Measures Across States Using District Unit of Analysis

The specific question addressed in this part may be stated as follows:

> When a number of equality measures, computed using the district unit of analysis, are used to rank a set of states from more to less equal at one point in time, do the measures agree?

In other words, if we examine the rankings that result from the application of two or more equality measures computed using the district unit of analysis to a set of states at one point in time, will there be agreement among the rankings?

Three statistics that compare the rankings for the nine equality measures taken two at a time using the district unit of analysis are displayed in Table V-18. The Spearman rank correlations range from .5618 to .9955, the Agreement-Conflict measures from .7140 to .9830, and the concordance measures from .7809 to .9977. Compared to the unweighted pupil unit of analysis these statistics span a wider range but it will be shown that there is more agreement among the equality measures when the district compared to the unweighted pupil is the unit of analysis.

Again, all the rank correlations and concordance measures are highly significant. However, if the arbitrary cutoffs of .84 for the rank

TABLE V- 18

MEASURES OF ASSOCIATION BETWEEN EQUALITY MEASURES USED ACROSS STATES IN 22 STATE SAMPLE (district unit of analysis)

	RES RANGE	FED RR	REL MN DEV	PERM VAR	VAR	COEF VAR	STD DEV LGS	GINI	MEASURES OF ASSOCIATION
RANGE	.8125 .8270 .9063	.7685 .7880 .8842	.8656 .8480 .9328	.6578 .7530 .8289	.9605 .9350 .9802	.9108 .8830 .9554	.8125 .8270 .9063	.8848 .8570 .9424	Spearman Rank Correlation(ρ_s) Agreement-Conflict Measure (AC Concordance Measure (W)
RES RANGE	X	.9006 .8660 .9503	.8667 .8400 .9334	.5618 .727 .7809	.8927 .883 .9464	.7933 .805 .8967	.7482 .775 .8741	.8735 .8400 .9368	ρ_s AC W
FED RR		X	.9503 .9220 .9752	.7143 .801 .8571	.8329 .818 .9164	.8859 .8790 .9430	.7979 .8230 .8989	.9481 .9130 .9740	ρ_s AC W
REL MN DEV			X	.7075 .8010 .8538	.9187 .8790 .9593	.9718 .9480 .9859	.8521 .8740 .9260	.9955 .9830 .9977	ρ_s AC W
PERM VAR				X	.5935 .7140 .7967	.7120 .7920 .8560	.7436 .7880 .8718	.7075 .7920 .8538	ρ_s AC W
VARIANCE					X	.9277 .8870 .9639	.8261 .8310 .9130	.9289 .8870 .9644	ρ_s AC W
COEF VAR						X	.8283 .8740 .9142	.9763 .9570 .9881	ρ_s AC W
STD DEV LGS							X	.8340 .8740 .9170	ρ_s AC W

correlation and Agreement-Conflict measures (and .92 for the concordance measures) are applied simultaneously to isolate the pairs of equality measures that agree relatively more, 18 of the 36, or half, the measures meet or exceed these criteria. This is considerably greater agreement than existed for the unweighted pupil unit of analysis where only 10 of the 36 cases met or exceeded these criteria.

The greater agreement for the district unit of analysis can also be seen when the unambiguous rankings for the pairs of equality measures computed using the district unit of analysis are examined. Table V-19 displays these unambiguous rankings and the agreement measured by this criterion is substantially greater for the district compared to the unweighted pupil unit of analysis. In fact, for 34 of the 36 pairs of equality measures, the number of unambiguous rankings is greater for the district than the unweighted pupil unit of analysis.

Simultaneously with the overall higher level of agreement evidenced for the district unit of analysis, there are groupings of measures that exhibit the most agreement and these groupings are similar to those for the unweighted pupil unit of analysis. There is relatively higher agreement among the Gini coefficient, relative mean deviation, and coefficient of variation than among any set of three measures, based on the unambiguous rankings. Furthermore, a relatively high level of agreement is maintained when the Federal range ratio and standard deviation of logarithms are added to the subset of measures.

These levels of agreement can be examined further by using groups of three and four equality measures, computed with the district unit of analysis, to rank the sample of 22 states. Table V-20 shows the concordance measure

TABLE V- 19

NUMBER OF UNAMBIGUOUS RANKINGS FOR PAIRS OF EQUALITY MEASURES USED ACROSS STATES IN 22 STATE SAMPLE
(district unit of analysis)

	RES RANGE	FED RR	REL MN DEV	PER VAR	VAR	COEF VAR	STD DEV LGS	GINI
RANGE	4	2	5	3	8	7	4	5
RES RANGE	X	4	4	2	6	2	2	3
FED RR		X	8	3	3	4	5	9
REL MN DEV			X	5	6	12	10	18
PERM VAR				X	2	4	4	6
VAR					X	7	3	6
COEF VAR						X	9	13
STD DEV LGS							X	9

TABLE V-20

CONCORDANCE MEASURES AND NUMBER OF UNAMBIGUOUS RANKINGS FOR GROUPS OF EQUALITY MEASURES, (district unit of analysis)

COEF VAR	ST DEV LGS	GINI	REL MN DEV	RED RR	W	NUMBER OF UNAMBIGUOUS RANKINGS
X	X	X			.9197	8
X	X		X		.9227	8
	X	X	X		.9292	9
X		X	X		.9875	11
X		X		X	.9578	4
		X	X	X	.9764	8
X	X	X	X		.9322	8
X		X	X	X	.9660	4
X	X	X		X	.9088	4

and the number of unambiguous rankings for nine examples where three and four equality measures are used to rank the 22 states. Evidence from this table strongly suggests, once again, that there is relatively more agreement when the equality measures are computed using the district compared to the unweighted pupil unit of analysis. The concordance measures are close to or greater than .92 and in all cases they are always greater for the district than the unweighted pupil unit of analysis for the same sets of equality measures. Furthermore, there are a relatively large number of unambiguous rankings even in comparison to the pairwise analysis of the equality measures computed using the unweighted pupil unit of analysis.

For the district unit of analysis there is relatively more agreement when equality measures are used to rank the 22 state sample compared to the equality measures computed using the unweighted pupil unit of analysis. For certain measures, namely the coefficient of variation, standard deviation of logarithms, relative mean deviation, Gini coefficient, and Federal range ratio , three or four equality measures can be used simultaneously and they will yield four or more unambiguous rankings and relatively high concordance measures. However, the selections of the district unit of analysis and the subset of equality measures are value judgments and most "equity assessors" would probably agree that the district unit of analysis cannot be used alone.

3. Assessment of Equality Measures Across States: Comparison of District and Unweighted Pupil Units of Analysis

The particular question addressed in this part may be stated as follows:

> When an equality measure is used to rank a number of states at one point in time, do the rankings that are assigned by the equality measure using the unweighted pupil as the unit of analysis agree with the rankings assigned by the same equality measure using the district as the unit of analysis?

The focus of this assessment is not on the agreement among two or more equality measures computed using the same unit of analysis as was the case in the previous two parts but whether the equality measures are consistent across units of analysis when used for interstate comparisons.

Table V-21 displays the three statistics of association for each equality measure computed using both units of analysis. Note that these statistics are rather low when compared to the pairwise comparisons of different equality measures using the same unit analysis. None of the Spearman rank correlations or the Agreement-Conflict measures is greater than the arbitrary cutoff of .84, except for the range which is unaffected by the unit of analysis. (The statistics are, however, highly significant.)

It should not come as a surprise that the measures are not in substantial agreement across units of analysis since the results of the separate analyses by unit of analysis differed substantially. However, the lack of substantial agreement across units of analysis forces a choice of one unit of analysis or the other if meaningful interstate rankings are to be produced by more than one equality measure. The lack of agreement between each equality measure computed with two units of analysis can also be documented by the unambiguous rankings. For the Federal range ratio, relative mean deviation, permissible variance, coefficient of variation, and Gini coefficient only one unambiguous ranking , the minimum number, can be formed using the same measure computed using both units of analysis. For the restricted range and standard deviation of logarithms there are two unambiguous rankings. Thus, there is fairly clear evidence that substantial agreement between the equality measures computed using two units of analysis does not exist.

TABLE V-21

MEASURES OF ASSOCIATION BETWEEN EQUALITY MEASURES COMPUTED USING THE DISTRICT AND UNWEIGHTED PUPIL UNITS OF ANALYSIS, 22 STATE SAMPLE

	SPEARMAN RANK CORRELATION	AGREEMENT CONFLICT MEASURE	CONCORDANCE MEASURE
RANGE	1.00	1.00	1.00
RES RANGE	.6217	.7400	.8108
FED RR	.4884	.667	.7442
REL MN DEV	.5280	.7060	.7640
PERM VAR	.6420	.7320	.8210
VAR	.8272	.8350	.9136
COEF VAR	.7493	.7880	.8746
STD DEV LGS	.8103	.8230	.9051
GINI	.5596	.7140	.7798

4. Conclusions

Viewed in a very rough sort of way, the conclusions for the equality measures used for interstate comparisons are not very different from the conclusions that were suggested for the equality measures used in one state over time. For the equality measures used in interstate comparisons it makes a difference which equality measures are utilized since there is not perfect agreement among the measures. Furthermore, the equality measures that embody similar value judgments agree more than those for which the implicit value judgments differ. For example, the three measures identified by certain value judgments in Section III, the coefficient of variation, standard deviation of logarithms, and Gini coefficient, were shown to agree relatively more than most subsets of equality measures.

In addition, two other measures that are also insensitive to equal percentage increases, the relative mean deviation and Federal range ratio, were also shown to agree relatively more with the three measures already mentioned than any other set of five equality measures out of the nine examined.

Only if a small set of equality measure are utilized for the district unit of analysis, however, will multiple measures produce more than two or three unambiguous rankings. If multiple measures are used with the unweighted pupil unit of analysis or with both units of analysis there will be agreement among the equality measures as judged by the concordance measure, but extensive discrimination, evaluated by the number of unambiguous rankings, will not be forthcoming.

Therefore, the selection of particular measures and units of analysis must be made if clear cut rankings are desired from the interstate comparisons. Although some agreement among the measures can be documented, the choice of a measure or unit of analysis is important.

B. Wealth Neutrality Measures

The assessment of the behavior of the wealth neutrality measures when used to rank a set of states at one point in time is analyzed in four stages. First, the measures are compared pairwise and in groups of three and four using the unweighted pupil unit of analysis and second, a similar analysis is carried out for the district unit of analysis. The third stage includes a discussion of the comparison between units of analysis for the interstate wealth neutrality assessment and the conclusions are presented in the fourth stage.

A somewhat smaller sample is used for the interstate wealth neutrality comparisons than was utilized in the last part for the interstate equality comparisons. All nine wealth neutrality measures are available for only 11 states in 1975-76. However, seven measures, all but EXP DIF and the Hickrod Gini, are available for 18 states in 1975-76.

A decision was made to use the 18 state sample in this section for a couple of practical reasons. First, the EXP DIF measure does not embody certain preferable value judgments and, in addition, conflicts substantially with the other eight measures. Second, the Hickrod Gini cannot be computed in all cases. Therefore, the 18 state sample for seven wealth neutrality measures is utilized throughout this part.

The 18 state sample excludes four states that were examined in the previous part. Alabama is excluded since wealth data are unavialable. Maine, Massachusetts, Georgia are excluded since the slopes and elasticities based on W, W^2, and W^3 were not calculated in a comparable manner due to limitations in the computer program used for the regressions.

For completeness, however, the Spearman Rank Correlations between all pairs of the nine wealth neutrality measures when used for interstate comparisons for the 11 state sample are presented in Table V-22. The correlations using the unweighted pupil unit of analysis are presented above the diagonal and the district unit of analysis below the diagonal. This table shows the relatively low level of agreement between EXP DIF and the other wealth neutrality measures. However, this is not the case for the Hickrod Gini and this measure should be investigated further if some of the computational problems can be resolved.[10] Also, it should be noted that the individual rank correlations are somewhat different for the 11 state sample compared to the 18 state sample, to be discussed below, although the general conclusions that emerge from an examination of the two samples are not that different.

It must be emphasized again that wealth measures are not equalized state wide in the data presented for three of the states, Louisiana, Mississippi, and South Carolina. Furthermore, the 15 states in the 18 state sample where there is some form of state wide equalization, the level of equalization varied considerably from around 20% of full market value to 100% of full market value. Therefore, conclusions must be limited to the wealth neutrality measures and not the rankings of particular states.[11]

1. Assessment of Wealth Neutrality Measures Across States Using Unweighted Pupil Unit of Analysis

The particular question addressed in this part may be expressed as follows:

> When a number of wealth neutrality measures, computed using the unweighted pupil unit of analysis, are used to rank a set of states from more to less wealth neutral at one point in time, do the rankings from the different wealth neutrality measures agree?

---

[10] The EXP DIF measure mighte be comsidered to embody more acceptable value judgments if it is divided by mean revenue. However, this possibility has not been investigated in this report.

[11] It should be noted that the elasticity measures do compensate for different levels of state wide equalization but it is impossible to compensate in cases where there is not state wide equalization.

TABLE V-22

SPEARMAN RANK CORRELATIONS BETWEEN WEALTH NEUTRALITY MEASURES IN 11 STATE SAMPLE

(unweighted pupil unit of analysis above diagonal,
district unit of analysis below diagonal)

	SIM CORR	SLOPE W	SLOPE W2	SLOPE W3	EXP DIF	HICK GINI	ELAST W	ELAST W2	ELAST W3
SIM CORR	X	.7909	.7273	.7364	.0455	.4091	.8091	.6818	.6546
SLOPE W	.7727	X	.9273	.9636	-.0091	.5545	.8545	.6545	.6636
SLOPE W2	.6818	.9455	X	.9818	.2000	.6727	.8727	.7545	.7364
SLOPE W3	.6909	.8727	.9636	X	.1545	.6818	.8909	.7455	.7364
EXP DIF	.3636	-.0818	.0273	.2182	X	.5909	.3182	.4909	.5091
HICK GINI	.5000	.5182	.6091	.7364	.5727	X	.8364	.9000	.9273
ELAST W	.8273	.6364	.4909	.4182	.2455	.3000	X	.9364	.9364
ELAST W2	.7364	.8000	.8364	.8364	.3818	.8000	.6818	X	.9818
ELAST W3	.5818	.6091	.7000	.7909	.5455	.9545	.4545	.9812	X

To put it another way, if we examine the rankings that result from the application of two or more wealth neutrality measures computed using the unweighted pupil unit of analysis to a set of states, at one point in time, will there be agreement among the rankings?

The three measures of association computed for the rankings yielded by the seven wealth neutrality measures, taken two at a time, are displayed in Table V-23 for the 18 state sample. The Spearman rank correlations range from .3044 to .9897, the Agreement-Conflict measures from .6270 to .9740, and the Concordance measures from .6522 to .9948.

The measures that are more highly related, however, are not randomly distributed among the pairs of wealth neutrality measures. It is fairly clear (and consistent with the .84, .84, .92 simultaneous cut off criteria utilized in the last part) that there is relatively more agreement among the three elasticity measures, ELAST W, ELAST W2, and ELAST W3, and among the three slope measures SLOPE W, SLOPE W2, and SLOPE W3. This is consistent with the method in which the measures are calculated and the resulting value judgments that are embodied in the measures, as discussed in Section II of this report.

This pattern of agreement within the elasticity and slope wealth neutrality measures also appears when the unambiguous rankings for the pairs of wealth neutrality measures are computed. The unambiguous rankings for the pairs of wealth neutrality measures used for interstate comparisons in the 18 state sample appear in Table V-24. By far the largest number of unambiguous rankings appear between the pairs of slope measures and between the pairs of elasticity measures while there are relatively few unambiguous ranking for the remaining pairs. (Recall that one is the minimum number of unambiguous rankings.)

TABLE V- 23

MEASURES OF ASSOCIATION BETWEEN WEALTH NEUTRALITY MEASURES USED ACROSS STATES IN 18 STATE SAMPLE
(unweighted pupil unit of analysis)

	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3	MEASURES OF ASSOCIATION
SIM CORR	.3457 .6410 .6729	.3086 .6270 .6543	.3044 .6270 .6522	.5831 .7520 .7915	.5501 .7060 .7750	.6037 .7320 .8019	Spearman Rank Correlation(ρ Agreement-Conflict Measure(Concordance Measure (W)
SLOPE W	X	.9525 .9220 .9763	.9505 .9220 .9752	.6698 .7710 .8349	.6409 .7520 .8204	.5975 .7390 .7988	ρ_s AC W
SLOPE W2		X	.9897 .9740 .9948	.5459 .7320 .7730	.5521 .7120 .7761	.5067 .6990 .7534	ρ_s AC W
SLOPE W3			X	.5273 .7190 .7637	.5212 .6990 .7606	.4840 .6860 .7420	ρ_s AC W
ELAST W				X	.9628 .9280 .9814	.9711 .9410 .9856	ρ_s AC W
ELAST W2					X	.9856 .9610 .9928	ρ_s AC W

TABLE V-24

NUMBER OF UNAMBIGUOUS RANKINGS FOR PAIRS OF WEALTH NEUTRALITY MEASURES USED ACROSS STATES IN 18 STATE SAMPLE
(unweighted pupil unit of analysis)

	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3
SIM CORR	1	1	1	1	1	2
SLOPE W	X	9	11	1	2	2
SLOPE W2		X	14	1	2	2
SLOPE W3			X	1	2	2
ELAST W				X	9	9
ELAST W2					X	12

When the wealth neutrality measures are examined in groups of three and four for interstate comparisons, considerable agreement still exists among the slope and among the elasticity measures, but not for other combinations. Tables V-25 through V-33 display nine examples of the wealth neutrality measures used in groups of three and four to rank the 18 states. The concordance measures and the number of unambiguous rankings for the nine multiple comparisons are summarized in Table V-34. When the three elasticity or slope measures are used together, there are a relatively large number of unambiguous rankings compared to other multiple rankings examined in this section. However, once measures outside of the particular sub-group are combined, the concordance measures drop substantially and the number of unambiguous rankings is always one, the minimum.

Thus, there is not considerable agreement among all seven wealth neutrality measures computed using the unweighted pupil unit of analysis when used to rank a set of states at one point in time. In other words, the selection of the correlation, slope, or elasticity measure for interstate wealth neutrality assessment does make a difference. However, there is considerable agreement among the three elasticity measures and among the three slope measures. Once a particular class of wealth neutrality measures is chosen it is not as critical whether the elasticity or the slope is calculated from a simple regression of revenues (or expenditures) on wealth or a regression using higher order wealth terms. But the selection of either the correlation, slope, or elasticity measure involves the selection among a number of value judgments.

2. Assessment of Wealth Neutrality Measures Across States Using District Unit of Analysis

The question addressed in this part may be stated as follows:

> When a number of wealth neutrality measures, computed using the district unit of analysis, are used to rank a set of states from more to less wealth neutral at one point in time, do the rankings from the different wealth neutrality measures agree?

TABLE V-25

YEAR--1975
MEASURE--SIM CORR
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	LOU	.36969
2	N M	.37259
3	MINN	.41110
4	N J	.41420
5	N C	.44016
6	W VA	.48610
7	VERMT	.48870
8	N H	.52550
9	S C	.55199
10	TEXAS	.62227
11	CONN	.63010
12	ORE	.70170
13	S D	.75930
14	FLA	.77344
15	KTY	.78380
16	N Y	.79020
17	MISS	.79241
18	MO	.80990

YEAR--1975
MEASURE--SLOPE W
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	1,02600
2	N C	1,08930
3	TEXAS	1,72000
4	VERMT	1,96500
5	MISS	2,47750
6	W VA	2,98200
7	CONN	3,12870
8	N J	3,14990
9	FLA	3,28420
10	N H	3,54850
11	ORE	7,27300
12	KTY	8,26000
13	LOU	8,63250
14	MINN	10,76500
15	S D	11,68600
16	N Y	14,29000
17	MO	24,93600
18	S C	96.30500

YEAR--1975
MEASURE--ELAST W
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	MISS	.05851
2	LOU	.05921
3	N M	.06156
4	N C	.10402
5	VERMT	.10665
6	MINN	.12900
7	TEXAS	.13054
8	N J	.13913
9	W VA	.16694
10	FLA	.19096
11	N H	.19819
12	CONN	.19978
13	S D	.29118
14	ORE	.34457
15	MO	.36123
16	S C	.36969
17	N Y	.39972
18	KTY	.40078

SUMMARY RANKING MATRIX

				SUM
N M	2	1	3	6
N C	5	2	4	11
LOU	1	13	2	16
VERMT	7	4	5	16
TEXAS	10	3	7	20
N J	4	8	8	20
W VA	6	6	9	21
MISS	17	5	1	23
MINN	3	14	6	23
N H	8	10	11	29
CONN	11	7	12	30
FLA	14	9	10	33
ORE	12	11	14	37
S D	13	15	13	41
S C	9	18	16	43
KTY	15	12	18	45
N Y	16	16	17	49
MO	18	17	15	50

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
SIM CORR	UNWGT PUPIL	SLOPE W	UNWGT PUPIL	153	55	35.9
SIM CORR	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	38	24.8
SLOPE W	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	35	22.9

S= 3002.50 W= .6886

TABLE V-26

```
        YEAR--1975                        YEAR--1975                          YEAR--1975

   MEASURE--SIM CORR                 MEASURE--SLOPE W2                  MEASURE--FLAST W2

UNIT OF ANAL--UNWGT PUPIL         UNIT OF ANAL--UNWGT PUPIL          UNIT OF ANAL--UNWGT PUPIL


RANK   STATE           VALUE      RANK   STATE          VALUE       RANK   STATE          VALUE
----   -----           -----      ----   -----          -----       ----   -----          -----

   1   LOU            .36969         1   N M            .77756         1   N M           .09661
   2   N M            .37259         2   N C          1,69140          2   MISS          .10876
   3   MINN           .41110         3   TEXAS        1,85100          3   LOU           .11819
   4   N J            .41420         4   VERMT        2,54000          4   VERMT         .13785
   5   N C            .44016         5   W VA         3,08940          5   TEXAS         .14448
   6   W VA           .48610         6   FLA          3,36150          6   MINN          .15619
   7   VERMT          .48878         7   N J          4,12890          7   N C           .16195
   8   N H            .52550         8   MISS         4,26670          8   W VA          .17244
   9   S C            .55199         9   N H          4,87250          9   N J           .18266
  10   TEXAS          .62227        10   CONN         6,24920         10   FLA           .19861
  11   CONN           .63010        11   KTY          8,28700         11   N H           .27219
  12   ORE            .70170        12   ORE          8,67000         12   S D           .31446
  13   S D            .75930        13   S D         12,61900         13   MO            .31776
  14   FLA            .77344        14   MINN        13,80700         14   ORE           .39764
  15   KTY            .78380        15   N Y         15,47900         15   CONN          .39904
  16   N Y            .79020        16   LOU         16,49600         16   S C           .41672
  17   MISS           .79241        17   MO          21,93500         17   N Y           .43354
  18   MO             .80990        18   S C        118,06000         18   KTY           .48850




           SUMMARY RANKING MATRIX
           ------- ------- ------
                                           SUM
   N M        2       1       1              4
   N C        5       2       7             14
   VERMT      7       4       4             15
   TEXAS     10       3       5             18
   W VA       6       5       8             19
   LOU        1      16       3             20
   N J        4       7       9             20
   MINN       3      14       6             23
   MISS      17       8       2             27
   N H        8       9      11             28
   FLA       14       6      10             30
   CONN      11      10      15             36
   S D       13      13      12             38
   ORE       12      12      14             38
   S C        9      18      16             43
   KTY       15      11      18             44
   MO        18      17      13             48
   N Y       16      15      17             48

                  M E A S U R E -- U N I T    M E A S U R E -- U N I T      COMPARISONS   DISAGREEMENTS   CONFLICT PCT
                  ------------------------    ------------------------      -----------   -------------   ------------

                  SIM CORR      UNWGT PUPIL   SLOPE W2     UNWGT PUPIL          153             67            47.6
                  SIM CORR      UNWGT PUPIL   FLAST W2     UNWGT PUPIL          153             45            29.4
                  SLOPE W2      UNWGT PUPIL   FLAST W2     UNWGT PUPIL          153             44            28.8

                    S= 2820.50    W= .6468
```

TABLE V-27

YEAR--1975		
MEASURE--SIM CORR		
UNIT OF ANAL--UNWGT PUPIL		
RANK	**STATE**	**VALUE**
1	LOU	.36969
2	N M	.37259
3	MINN	.41110
4	N J	.41420
5	N C	.44016
6	W VA	.48610
7	VERMT	.48870
8	N H	.52550
9	S C	.58199
10	TEXAS	.62227
11	CONN	.63010
12	ORE	.70170
13	S D	.75930
14	FLA	.77344
15	KTY	.78380
16	N Y	.79020
17	MISS	.79241
18	MO	.80990

YEAR--1975		
MEASURE--SLOPE W3		
UNIT OF ANAL--UNWGT PUPIL		
RANK	**STATE**	**VALUE**
1	N M	.54014
2	N C	1.67380
3	TEXAS	2.28780
4	VERMT	2.47940
5	FLA	3.67240
6	W VA	3.72100
7	N J	4.18380
8	CONN	5.04390
9	MISS	5.31070
10	N H	5.59100
11	ORE	7.65900
12	KTY	10.17500
13	S D	12.15000
14	MINN	13.66500
15	N Y	15.49600
16	LOU	17.01900
17	MO	21.60600
18	S C	111.01000

YEAR--1975		
MEASURE--ELAST W3		
UNIT OF ANAL--UNWGT PUPIL		
RANK	**STATE**	**VALUE**
1	N M	.03238
2	LOU	.11673
3	MISS	.14026
4	VERMT	.14457
5	MINN	.15453
6	N C	.16046
7	TEXAS	.17464
8	N J	.18508
9	W VA	.20769
10	FLA	.21459
11	S D	.30294
12	N H	.31227
13	MO	.31915
14	CONN	.32204
15	ORE	.35127
16	S C	.42032
17	N Y	.43045
18	KTY	.59228

SUMMARY RANKING MATRIX

				SUM
N M	2	1	1	4
N C	5	2	6	13
VERMT	7	4	4	15
LOU	1	16	2	19
N J	4	7	8	19
TEXAS	10	3	7	20
W VA	6	6	9	21
MINN	3	14	5	22
MISS	17	9	3	29
FLA	14	5	10	29
N H	8	10	12	30
CONN	11	8	14	33
S D	13	13	11	37
ORE	12	11	15	38
S C	9	18	16	43
KTY	15	12	18	45
MO	18	17	13	48
N Y	16	15	17	48

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
SIM CORR	UNWGT PUPIL	SLOPE W3	UNWGT PUPIL	153	57	37.3
SIM CORR	UNWGT PUPIL	ELAST W3	UNWGT PUPIL	153	41	26.8
SLOPE W3	UNWGT PUPIL	ELAST W3	UNWGT PUPIL	153	48	31.4

S= 2802.50 W= .6927

```
                                                    TABLE V-28

        YEAR--1975                    YEAR--1975                    YEAR--1975                    YEAR--19
   MEASURE--ELAST W              MEASURE--ELAST W2             MEASURE--ELAST W3             MEASURE--
UNIT OF ANAL--UNWGT PUPIL     UNIT OF ANAL--UNWGT PUPIL     UNIT OF ANAL--UNWGT PUPIL     UNIT OF ANAL--


RANK   STATE          VALUE    RANK   STATE          VALUE    RANK   STATE          VALUE    RANK   STATE        VALUE
----   -----          -----    ----   -----          -----    ----   -----          -----    ----   -----        -----

   1   MISS          .05051       1   N M           .09661       1   N M           .03288
   2   LOU           .05921       2   MISS          .10076       2   LOU           .11673
   3   N M           .06156       3   LOU           .11319       3   MISS          .13026
   4   N C           .10302       4   VERMT         .13785       4   VERMT         .14907
   5   VERMT         .10665       5   TEXAS         .14098       5   MINN          .15953
   6   MINN          .12480       6   MINN          .15619       6   N C           .16096
   7   TEXAS         .13054       7   N C           .16195       7   TEXAS         .17369
   8   N J           .13913       8   W VA          .17299       8   N J           .18908
   9   W VA          .16644       9   N J           .18266       9   W VA          .20769
  10   FLA           .17096      10   FLA           .19551      10   FLA           .21489
  11   N H           .17819      11   N H           .27219      11   S D           .30494
  12   CONN          .19978      12   S D           .31443      12   N H           .31427
  13   S D           .27118      13   MO            .31776      13   MO            .31915
  14   ORE           .33357      14   ORE           .39769      14   CONN          .32289
  15   MO            .36123      15   CONN          .39909      15   ORE           .35127
  16   S C           .36464      16   S C           .41672      16   S C           .42032
  17   N Y           .37972      17   N Y           .43359      17   N Y           .43095
  18   KTY           .40878      18   KTY           .48255      18   KTY           .59289


          SUMMARY RANKING MATRIX
          ------- ------- ------
                                                SUM
N M          3       1       1                    5
MISS         1       2       3                    6
LOU          2       3       2                    7
VERMT        5       4       4                   13
N C          4       7       6                   17
MINN         6       6       5                   17
TEXAS        7       5       7                   19
N J          8       9       8                   25
W VA         9       8       9                   26
FLA         10      10      10                   30
N H         11      11      12                   34
S D         13      12      11                   36
MO          15      13      13                   41
CONN        12      15      14                   41
ORE         14      14      15                   43
S C         16      16      16                   48
N Y         17      17      17                   51
KTY         18      18      18                   54

                                                  M E A S U R E -- U N I T    M E A S U R E -- U N I T        COMPARISONS    DISAGREEMENTS    CONFLICT PCT
                                                  ------------------------    ------------------------        -----------    -------------    ------------

                                                  ELAST W      UNWGT PUPIL    ELAST W2     UNWGT PUPIL                153               11             7.2
                                                  ELAST W      UNWGT PUPIL    ELAST W3     UNWGT PUPIL                153                7             4.6
                                                  ELAST W2     UNWGT PUPIL    ELAST W3     UNWGT PUPIL                153                6             3.9

                                                        S= 4282.50    W= .9821
```

TABLE V-29

```
     YEAR--1975                       YEAR--1975                       YEAR--1975

 MEASURE--SLOPE W                 MEASURE--SLOPE W2                MEASURE--SLOPE W3

UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL


RANK   STATE          VALUE     RANK   STATE          VALUE     RANK   STATE          VALUE
----   -----          -----     ----   -----          -----     ----   -----          -----

   1   N M          1.02680        1   N M           .77756        1   N M           .54014
   2   N C          1.08430        2   N C          1.69140        2   N C          1.67580
   3   TEXAS        1.72000        3   TEXAS        1.85100        3   TEXAS        2.28700
   4   VERMT        1.96500        4   VERMT        2.54000        4   VERMT        2.47990
   5   MISS         2.47750        5   W VA         3.08940        5   FLA          3.67240
   6   W VA         2.90200        6   FLA          3.36150        6   W VA         3.72100
   7   CONN         3.12870        7   N J          4.12890        7   N J          4.18800
   8   N J          3.14490        8   MISS         4.26670        8   CONN         5.04340
   9   FLA          3.28320        9   N H          4.87250        9   MISS         5.51570
  10   N H          3.54850       10   CONN         6.24920       10   N H          5.59100
  11   ORE          7.27300       11   KTY          8.28700       11   ORE          7.65900
  12   KTY          8.26000       12   ORE          8.67000       12   KTY         10.17500
  13   LOU          8.63250       13   S D         12.61900       13   S D         12.15800
  14   MINN        10.96500       14   MINN        13.80700       14   MINN        13.66500
  15   S D         11.68600       15   N Y         15.49900       15   N Y         15.49600
  16   N Y         14.29000       16   LOU         16.49600       16   LOU         17.01900
  17   MO          24.93600       17   MO          21.93500       17   MO          21.68600
  18   S C         96.30500       18   S C        110.06000       18   S C        111.01000




        SUMMARY RANKING MATRIX
        ------- ------- ------
                                      SUM
N M          1     1     1              3
N C          2     2     2              6
TEXAS        3     3     3              9
VERMT        4     4     4             12
W VA         6     5     6             17
FLA          9     6     5             20
MISS         5     8     9             22
N J          8     7     7             22
CONN         7    10     8             25
N H         10     9    10             29
ORE         11    12    11             34
KTY         12    11    12             35
S D         15    13    13             41
MINN        14    14    14             42
LOU         13    16    16             45
N Y         16    15    15             46
MO          17    17    17             51
S C         18    18    18             54


M E A S U R E -- U N I T      M E A S U R E -- U N I T      COMPARISONS   DISAGREEMENTS   CONFLICT PCT
------------------------      ------------------------      -----------   -------------   ------------

SLOPE W      UNWGT PUPIL      SLOPE W2     UNWGT PUPIL              153              12            7.8
SLOPE W      UNWGT PUPIL      SLOPE W3     UNWGT PUPIL              153              12            7.8
SLOPE W2     UNWGT PUPIL      SLOPE W3     UNWGT PUPIL              153               4            2.6

S= 4256.50   W= .9761
```

TABLE V-30

YEAR--1975
MEASURE--SLOPE W
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	1.02680
2	N C	1.08430
3	TEXAS	1.72000
4	VERMT	1.96500
5	MISS	2.47750
6	W VA	2.98200
7	CONN	3.12870
8	N J	3.14490
9	FLA	3.28320
10	N H	3.59850
11	ORE	7.27300
12	KTY	8.26000
13	LOU	8.63250
14	MINN	10.96500
15	S D	11.68600
16	N Y	14.29000
17	MO	29.93600
18	S C	96.30800

YEAR--1975
MEASURE--SLOPE W2
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	.77786
2	N C	1,69140
3	TEXAS	1,85100
4	VERMT	2,54000
5	W VA	3,08940
6	FLA	3,36150
7	N J	4,12890
8	MISS	4,26670
9	N H	4,87250
10	CONN	6,24920
11	KTY	8,28700
12	ORE	8,67000
13	S D	12,61900
14	MINN	13,80700
15	N Y	15,49700
16	LOU	16,49600
17	MO	21,93500
18	S C	110,06000

YEAR--1975
MEASURE--ELAST W
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	MISS	.05803
2	LOU	.05921
3	N M	.06156
4	N C	.10082
5	VERMT	.10605
6	MINN	.12900
7	TEXAS	.13054
8	N J	.13713
9	W VA	.16644
10	FLA	.19096
11	N H	.19819
12	CONN	.19978
13	S D	.29118
14	ORE	.33607
15	MO	.46128
16	S C	.56464
17	N Y	.59972
18	KTY	.68078

YEAR--1975
MEASURE--ELAST W2
UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	.04661
2	MISS	.10876
3	LOU	.11319
4	VERMT	.14785
5	TEXAS	.14948
6	MINN	.15614
7	N C	.16195
8	W VA	.17244
9	N J	.18766
10	FLA	.19551
11	N H	.27214
12	S D	.31443
13	MO	.31776
14	ORE	.39764
15	CONN	.39904
16	S C	.41672
17	N Y	.43354
18	KTY	.48238

SUMMARY RANKING MATRIX

					SUM
N M	1	1	3	1	6
N C	2	2	4	7	15
MISS	5	8	1	2	16
VERMT	4	4	5	4	17
TEXAS	3	3	7	5	18
W VA	6	5	9	8	28
N J	8	7	8	9	32
LOU	13	16	2	3	34
FLA	9	6	10	10	35
MINN	14	14	6	6	40
N H	10	9	11	11	41
CONN	7	10	12	15	44
ORE	11	12	14	14	51
S D	15	13	13	12	53
KTY	12	11	18	18	59
MO	17	17	15	13	62
N Y	16	15	17	17	65
S C	18	18	16	16	68

MEASURE -- UNIT		MEASURE -- UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
SLOPE W	UNWGT PUPIL	SLOPE W2	UNWGT PUPIL	153	12	7.8
SLOPE W	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	35	22.9
SLOPE W	UNWGT PUPIL	ELAST W2	UNWGT PUPIL	153	38	24.8
SLOPE W2	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	41	26.8
SLOPE W2	UNWGT PUPIL	ELAST W2	UNWGT PUPIL	153	44	28.8
ELAST W	UNWGT PUPIL	ELAST W2	UNWGT PUPIL	153	11	7.2

S= 6128.00 W= .7905

TABLE V-31

```
      YEAR--1975                        YEAR--1975                        YEAR--1975                        YEAR--1975

   MEASURE--SLOPE W                  MEASURE--ELAST W                  MEASURE--ELAST W2                 MEASURE--ELAST W3

UNIT OF ANAL--UNWGT PUPIL         UNIT OF ANAL--UNWGT PUPIL         UNIT OF ANAL--UNWGT PUPIL         UNIT OF ANAL--UNWGT PUPIL


RANK   STATE          VALUE       RANK   STATE          VALUE       RANK   STATE          VALUE       RANK   STATE          VALUE
----   -----          -----       ----   -----          -----       ----   -----          -----       ----   -----          -----

   1   N M          1.02680          1   MISS          .05851          1   N M           .09661          1   N M           .03738
   2   N C          1.08430          2   LOU           .05921          2   MISS          .10076          2   LOU           .11673
   3   TEXAS        1.72000          3   N M           .06156          3   LOU           .11814          3   MISS          .13026
   4   VERMT        1.96500          4   N C           .10382          4   VERMT         .13785          4   VERMT         .13457
   5   MISS         2.47750          5   VERMT         .10665          5   TEXAS         .14098          5   MINN          .15452
   6   W VA         2.98200          6   MINN          .12400          6   MINN          .15614          6   N C           .16046
   7   CONN         3.12870          7   TEXAS         .13054          7   N C           .16195          7   TEXAS         .17564
   8   N J          3.14490          8   N J           .13713          8   W VA          .17244          8   N J           .18508
   9   FLA          3.20320          9   W VA          .16644          9   N J           .18266          9   W VA          .20769
  10   N H          3.54850         10   FLA           .19096         10   FLA           .19551         10   FLA           .21359
  11   ORE          7.27300         11   N H           .19819         11   N H           .27214         11   S D           .30794
  12   KTY          8.26000         12   CONN          .19978         12   S D           .31443         12   N H           .31727
  13   LOU          8.63250         13   S D           .29118         13   MO            .31776         13   MO            .31912
  14   MINN        10.96500         14   ORE           .33357         14   ORE           .39764         14   CONN          .32704
  15   S D         11.68600         15   MO            .36123         15   CONN          .39904         15   ORE           .35127
  16   N Y         14.29000         16   S C           .36464         16   S C           .41672         16   S C           .42032
  17   MO          24.93600         17   N Y           .39972         17   N Y           .43454         17   N Y           .43345
  18   S C         96.30500         18   KTY           .48078         18   KTY           .48265         18   KTY           .59225



          SUMMARY RANKING MATRIX
          ------- ------- ------
                                         SUM
N M          1      3      1      1        6
MISS         5      1      2      3       11
VERMT        4      5      4      4       17
N C          2      4      7      6       19
LOU         13      2      3      2       20
TEXAS        3      7      5      7       22
MINN        14      6      6      5       31
W VA         6      9      8      9       32
N J          8      8      9      8       33
FLA          9     10     10     10       39
N H         10     11     11     12       44
CONN         7     12     15     14       48
S D         15     13     12     11       51
ORE         11     14     14     15       54
MO          17     15     13     13       58
S C         18     16     16     16       66
KTY         12     18     18     18       66
N Y         16     17     17     17       67


MEASURE -- UNIT            MEASURE -- UNIT            COMPARISONS   DISAGREEMENTS   CONFLICT PCT
---------------------      ---------------------      -----------   -------------   ------------

SLOPE W     UNWGT PUPIL    ELAST W     UNWGT PUPIL            153              35           22.9
SLOPE W     UNWGT PUPIL    ELAST W2    UNWGT PUPIL            153              38           24.8
SLOPE W     UNWGT PUPIL    ELAST W3    UNWGT PUPIL            153              40           26.1
ELAST W     UNWGT PUPIL    ELAST W2    UNWGT PUPIL            153              11            7.2
ELAST W     UNWGT PUPIL    ELAST W3    UNWGT PUPIL            153               9            5.9
ELAST W2    UNWGT PUPIL    ELAST W3    UNWGT PUPIL            153               6            3.9

   S=  6616.00    W= .8535
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                                                   TABLE V-32

        YEAR--1975                       YEAR--1975                       YEAR--1975                       YEAR--1975

   MEASURE--SIM CORR                MEASURE--ELAST W                 MEASURE--ELAST W2                MEASURE--ELAST W3

 UNIT OF ANAL--UNWGT PUPIL       UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL        UNIT OF ANAL--UNWGT PUPIL


 RANK    STATE        VALUE      RANK    STATE        VALUE      RANK    STATE        VALUE      RANK    STATE        VALUE
 ----    -----        -----      ----    -----        -----      ----    -----        -----      ----    -----        -----

    1    LOU         .36969         1    MISS        .05051         1    N M         .04661         1    N M         .03731
    2    N M         .37289         2    LOU         .05921         2    MISS        .10876         2    LOU         .11673
    3    MINN        .41110         3    N M         .06156         3    LOU         .11019         3    MISS        .13026
    4    N J         .41420         4    N C         .10382         4    VERMT       .13785         4    VERMT       .13457
    5    N C         .44016         5    VERMT       .10465         5    TEXAS       .14048         5    MINN        .15453
    6    W VA        .48610         6    MINN        .12400         6    MINN        .15619         6    N C         .16096
    7    VERMT       .48870         7    TEXAS       .13054         7    N C         .16195         7    TEXAS       .17364
    8    N H         .52550         8    N J         .13913         8    W VA        .17244         8    N J         .18508
    9    S C         .53199         9    W VA        .16444         9    N J         .18266         9    W VA        .20769
   10    TEXAS       .62227        10    FLA         .19096        10    FLA         .19501        10    FLA         .21359
   11    CONN        .63010        11    N H         .19819        11    N H         .27214        11    S D         .30794
   12    ORE         .70170        12    CONN        .19978        12    S D         .31443        12    N H         .31227
   13    S D         .75930        13    S D         .29118        13    MO          .31776        13    MO          .31415
   14    FLA         .77344        14    ORE         .33357        14    ORE         .39764        14    CONN        .32204
   15    KTY         .78380        15    MO          .36128        15    CONN        .39904        15    ORE         .35127
   16    N Y         .79020        16    S C         .36464        16    S C         .41672        16    S C         .42032
   17    MISS        .79241        17    N Y         .39972        17    N Y         .43484        17    N Y         .43345
   18    MO          .80990        18    KTY         .48078        18    KTY         .48848        18    KTY         .59725


         SUMMARY RANKING MATRIX
         ------- ------- ------
                                         SUM
  N M         2      3      1      1       7
  LOU         1      2      3      2       8
  MINN        3      6      6      5      20
  VERMT       7      5      4      4      20
  N C         5      4      7      6      22
  MISS       17      1      2      3      23
  TEXAS      10      7      5      7      29
  N J         4      8      9      8      29
  W VA        6      9      8      9      32
  N H         8     11     11     12      42    M E A S U R E -- U N I T    M E A S U R E -- U N I T    COMPARISONS   DISAGREEMENTS   CONFLICT PCT
  FLA        14     10     10     10      44    ------------------------    ------------------------    -----------   -------------   ------------
  S D        13     13     12     11      49
  CONN       11     12     15     14      52
  ORE        12     14     14     15      55    SIM CORR      UNWGT PUPIL   ELAST W       UNWGT PUPIL           153              38           24.8
  S C         9     16     16     16      57    SIM CORR      UNWGT PUPIL   ELAST W2      UNWGT PUPIL           153              45           29.4
  MO         18     15     13     13      59    SIM CORR      UNWGT PUPIL   ELAST W3      UNWGT PUPIL           153              41           26.8
  N Y        16     17     17     17      67    ELAST W       UNWGT PUPIL   ELAST W2      UNWGT PUPIL           153              11            7.2
  KTY        15     18     18     18      69    ELAST W       UNWGT PUPIL   ELAST W3      UNWGT PUPIL           153               9            5.9
                                                ELAST W2      UNWGT PUPIL   ELAST W3      UNWGT PUPIL           153               6            3.9


                                                      S=  6450.00    W=  .8320
```

TABLE V-33

YEAR--1975

MEASURE--SIM CORR

UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	LOU	.36969
2	N M	.37259
3	MINN	.41110
4	N J	.41420
5	N C	.44016
6	W VA	.48610
7	VERMT	.48870
8	N H	.52550
9	S C	.55199
10	TEXAS	.62227
11	CONN	.63010
12	ORE	.70170
13	S D	.75930
14	FLA	.77344
15	KTY	.78380
16	N Y	.79020
17	MISS	.79241
18	MO	.80990

YEAR--1975

MEASURE--SLOPE W

UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	1.02680
2	N C	1.08430
3	TEXAS	1.72000
4	VERMT	1.96500
5	MISS	2.47750
6	W VA	2.98200
7	CONN	3.12870
8	N J	3.14490
9	FLA	3.28420
10	N H	3.54050
11	ORE	7.27500
12	KTY	8.26000
13	LOU	8.63250
14	MINN	10.96500
15	S D	11.68600
16	N Y	14.29000
17	MO	24.93600
18	S C	96.30500

YEAR--1975

MEASURE--ELAST W

UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	MISS	.05851
2	LOU	.05921
3	N M	.06156
4	N C	.10382
5	VERMT	.10465
6	MINN	.12400
7	TEXAS	.13054
8	N J	.13913
9	W VA	.16644
10	FLA	.19096
11	N H	.19819
12	CONN	.19978
13	S D	.29118
14	ORE	.33387
15	MO	.36123
16	S C	.36464
17	N Y	.39972
18	KTY	.48078

YEAR--1975

MEASURE--ELAST WS

UNIT OF ANAL--UNWGT PUPIL

RANK	STATE	VALUE
1	N M	.03238
2	LOU	.11672
3	MISS	.13026
4	VERMT	.13457
5	MINN	.15453
6	N C	.16046
7	TEXAS	.17564
8	N J	.18508
9	W VA	.20769
10	FLA	.21359
11	S D	.30294
12	N H	.31727
13	MO	.31915
14	CONN	.32204
15	ORE	.35127
16	S C	.42032
17	N Y	.43345
18	KTY	.59725

SUMMARY RANKING MATRIX

					SUM
N M	2	1	3	1	7
N C	5	2	4	6	17
LOU	1	13	2	2	18
VERMT	7	4	5	4	20
MISS	17	5	1	3	26
TEXAS	10	3	7	7	27
MINN	3	14	6	5	28
N J	4	8	8	8	28
W VA	6	6	9	9	30
N H	8	10	11	12	41
FLA	14	9	10	10	43
CONN	11	7	12	14	44
S D	13	15	13	11	52
ORE	12	11	14	15	52
S C	9	18	16	16	59
MO	18	17	15	13	63
KTY	15	12	18	18	63
N Y	16	16	17	17	66

MEASURE--UNIT		MEASURE--UNIT		COMPARISONS	DISAGREEMENTS	CONFLICT PCT
SIM CORR	UNWGT PUPIL	SLOPE W	UNWGT PUPIL	153	55	35.9
SIM CORR	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	38	24.8
SIM CORR	UNWGT PUPIL	ELAST WS	UNWGT PUPIL	153	41	26.8
SLOPE W	UNWGT PUPIL	ELAST W	UNWGT PUPIL	153	35	22.9
SLOPE W	UNWGT PUPIL	ELAST WS	UNWGT PUPIL	153	40	26.1
ELAST W	UNWGT PUPIL	ELAST WS	UNWGT PUPIL	153	9	5.9

S= 5592.00 W= .7214

TABLE V-34

CONCORDANCE MEASURES AND NUMBER OF UNAMBIGUOUS RANKINGS FOR GROUPS OF WEALTH NEUTRALITY MEASURES, 18 STATE SAMPLE
(unweighted pupil unit of analysis)

TABLE	SIM CORR	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3	W	NUMBER OF UNAMBIGUOUS RANKINGS
V-25	X	X			X			.6886	1
V-26	X		X			X		.6468	1
V-27	X			X			X	.6427	1
V-28					X	X	X	.9821	8
V-29		X	X	X				.9761	9
V-30		X	X		X	X		.7905	1
V-31		X			X	X	X	.8535	1
V-32	X				X	X	X	.8320	1
V-33	X	X			X		X	.7214	1

In other words, if we look at the rankings that result from the application of two or more wealth neutrality measures computed using the district unit of analysis to a set of states, at one point in time, will there be agreement among the rankings?

The three measures of association between the rankings from the seven wealth neutrality measures, taken two at a time, are displayed in Table V-35. Compared to the wealth neutrality measures using the unweighted pupil unit of analysis, the measures of association for the district unit of analysis span a somewhat wider range although the pattern of agreement is very similar. The Spearman rank correlation ranges from .2528 to .9628, the Agreement-Conflict measure from .5950 to .9410, and the Concordance measure from .6264 to .9814. At the same time, the groups of measures that are in agreement relatively more than any other groups are the three elasticity measures and the three slope measures. All three of the pairs of slope measures exceed the .84, .84, .92 cutoff utilized earlier and two of the three pairs of elasticity measures exceed this cutoff. Furthermore, the agreement among the two groups is all the more marked since none of the other fifiteen pairs of wealth neutrality measures meet these criteria.

This pattern of relationships between the wealth neutrality measures is repeated when the unambiguous rankings are computed for pairs of wealth neutrality measures. These unambiguous rankings are displayed in Table V-36. There are considerably more unambiguous rankings for the pairs of elasticity measures and pairs of slope measures than for most other pair of wealth neutrality measures. This is again the same pattern that was observed for the wealth neutrality measures when the unweighted pupil unit of analysis was utilized.

TABLE V- 35

MEASURES OF ASSOCIATION BETWEEN WEALTH NEUTRALITY MEASURES USED ACROSS STATES IN 18 STATE SAMPLE
(district unit of analysis)

	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3	MEASURES OF ASSOCIATION
SIM CORR	.5046	.2528	.2714	.8452	.7110	.5851	Spearman Rank Correlation(ρ_s)
	.6730	.5950	.6140	.8240	.7650	.7190	Agreement-Conflict Measure($\widehat{AC}$)
	.7523	.6264	.6357	.9226	.8555	.7926	Concordance Measure (W)
SLOPE W	X	.9133	.8844	.5624	.7276	.6429	ρ_s
		.8820	.8630	.7190	.7520	.7190	$\widehat{AC}$
		.9567	.9422	.7812	.8638	.8215	W
SLOPE W2		X	.9628	.2693	.5604	.5026	ρ_s
			.9410	.6010	.6990	.6930	$\widehat{AC}$
			.9814	.6347	.7802	.7513	W
SLOPE W3			X	.2838	.6120	.6182	ρ_s
				.5950	.7060	.7390	$\widehat{AC}$
				.6419	.8060	.8091	W
ELAST W				X	.8535	.7337	ρ_s
					.8500	.8040	$\widehat{AC}$
					.9267	.8669	W
ELAST W2					X	.9340	ρ_s
						.9020	$\widehat{AC}$
						.9670	W

TABLE V-36

NUMBER OF UNAMBIGUOUS RANKINGS FOR PAIRS OF WEALTH NEUTRALITY MEASURES USED ACROSS STATES IN 18 STATE SAMPLE
(district unit of analysis)

	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3
SIM CORR	1	1	1	3	1	2
SLOPE W	X	4	3	1	1	1
SLOPE W2		X	11	1	1	1
SLOPE W3			X	1	1	1
ELAST W				X	3	4
ELAST W2					X	7

The final comparisons for the wealth neutrality measures using the district unit of analysis are nine cases where groups of three and four meausres are used to rank the 18 states. Although the actual rankings are not shown in this report, the concordance measures and number of unambiguous rankings for the multiple comparisons are shown in Table V-37. The concordance measures and the number of unambiguous rankings are larger for the groups of three elasticity and slope measures, as would be expected from the pairwise comparisons. However, the number of unambiguous rankings are considerably less than for the wealth neutrality measure using the unweighted pupil unit of analysis, displayed in Table V-34.

Thus, except for the number of unambiguous rankings for multiple comparisons, the conclusions for the wealth neutrality measures when used across states are very similar for the unweighted pupil and district units of analysis. There are substantial contradictions among most wealth neutrality measures except the three elasticity measures agree substantially with one another as do the three slope measures. Some selection must be made among the correlation, slope, and elasticity measures, but the particular functional form of the slope or elasticity measure is not as important as the choice among the three classes of measures.

3. Assessment of Wealth Neutrality Measures Across States: Comparison of District and Unweighted Pupil Units of Analysis

The specific question addressed in this part may be stated as follows:

> When a wealth neutrality measure is used to rank a set of states at one point in time, do the rankings that are assigned by the wealth neutrality measure using the unweighted pupil unit of analysis agree with the rankings assigned by the same wealth neutrality measure using the district unit of analysis?

The focus of this assessment is not on the agreement or contradictions among two or more wealth neutrality measures as was the case for parts 1 and 2 but whether

TABLE V-37

CONCORDANCE MEASURES AND NUMBER OF UNAMBIGUOUS RANKINGS FOR GROUPS OF WEALTH NEUTRALITY MEASURES, 18 STATE SAMPLE (district unit of analysis)

SIM CORR	SLOPE W	SLOPE W2	SLOPE W3	ELAST W	ELAST W2	ELAST W3	W	NUMBER OF UNAMBIGUOUS RANKINGS
X	X			X			.7583	1
X		X			X		.6721	1
X			X			X	.6610	1
				X	X	X	.8936	3
	X	X	X				.9468	3
	X	X		X	X		.7358	1
	X			X	X	X	.8068	1
X				X	X	X	.8323	1
X	X			X		X	.7343	1

the wealth neutrality measures are consistent across units of analysis.

The measures of association for the wealth neutrality measures computed using both units of analysis are displayed in Table V-38. The measures show somewhat more agreement than for the equality measures used for interstate comparisons. For the wealth neutrality measures the measures of association for SLOPE W and SLOPE W2 exceed the .84, .84, .92 cutoff while none of the equality measures exceeded this level. (See Table V-21.) Furthermore, there are more than one unambiguous rankings for all pairs except ELAST W and ELAST W3. There are five unambiguous rankings for SLOPE W, four each for SLOPE W2 and SLOPE W3, three for ELAST W2 and two for SIM CORR.

Thus, while there is not perfect agreement between the wealth neutrality measures used for the interstate comparisons computed on two units of analysis, there are not the widespread differences that were observed between units of analysis for the equality measures used for interstate comparisons. Since the conclusions that were drawn for the wealth neutrality measures used for interstate comparisons separately for each unit of analysis were similar, it is not surprising that there is a reasonable amount of agreement between units of analysis.

4. Conclusions

The conclusions for the wealth neutrality measures used for interstate comparisons are relatively straight forward. It clearly makes a difference which wealth neutrality measure or measures are chosen for interstate comparisons. There are considerable and consistent differences among the three classes of wealth neutrality measures identified as the correlation, elasticity, and slope classes.

However, there appears to be considerable agreement among the three slope measures and among the three elasticity measures using either unit of analysis.

TABLE V-38

MEASURES OF ASSOCIATION BETWEEN WEALTH NEUTRALITY MEASURES COMPUTED USING THE DISTRICT AND UNWEIGHTED PUPIL UNITS OF ANALYSIS, 18 STATE SAMPLE

	SPEARMAN RANK CORRELATION	AGREEMENT CONFLICT MEASURE	CONCORDANCE MEASURE
SIM CORR	.7730	.7970	.8865
SLOPE W	.8555	.8560	.9278
SLOPE W2	.9195	.8950	.9598
SLOPE W3	.8349	.8370	.9174
ELAST W	.7812	.8040	.8906
ELAST W2	.7915	.8040	.8958
ELAST W3	.7234	.7580	.8617

This was documented in the wealth neutrality section briefly at the beginning for an 11 state sample and rather extensively for an 18 state sample. In addition, there appear to be some differences, but not substantial ones, for each wealth neutrality measure when the units of analysis are compared.

Thus, ceratin choices must be made among classes of wealth neutrality measures if discriminating interstate comparisons are to emerge.

VI. Sensitivity Analysis

This section presents a limited number of sensitivity analyses focusing on several aspects of equity measurement methodology. The analyses presented in this part represent an extremely small percentage of the types of analyses that need to be carried out before the importance of the various choices that are made when equity is assessed are better understood. With the available data, however, only a limited number of sensitivity analyses can be carried out.

The first part of this section presents a very brief analysis of the effects of using a weighted student unit of analysis on the equality and wealth neutrality measures, particularly when they are observed in one state over time. The second sensitivity analysis focuses on the effects of alternative specifications of the dependent variable, especially alternative treatments of debt and capital. The third part of this section presents the equality and wealth neutrality measures for one state, New York, without the major city, New York City. The questions raised by the existence of large cities can only be touched upon in this report since measures for one year only are available for New York in the data set accumulated for this report. Finally, issues related to the existence of multiple district types are discussed in the last part of this section.

A. Weighted Student Unit of Analysis

The assessment of equality and wealth neutrality using the weighted pupil unit of analysis is important for several reasons. First, a number of states use a weighted student count extensively in many public policy decisions including the distribution of state aid. Second, the current regulations that spell out the way in which the Federal government plans to measure equality allow the use of weighted pupil counts at the discretion of the state and a sensitivity analysis such as this can help to evaluate the significance of this option. Third, as discussed in Section II, it can be argued that when "categoricals" are included in the dependent (revenue or expenditure) variable, weights that incorporate the categories should be included in the pupil measures as well.

The use of the weighted pupil unit of analysis changes the basic unit in the distribution (revenues/weighted pupils) and changes the number of units in the distribution (weighted pupils) compared to the district and unweighted pupil units of analysis. As a result, the use of the weighted pupil unit of analysis has the potential to change the results of the equality or wealth neutrality analysis over time quite considerably when compared to the other units of analysis.

The assessment of the weighted pupil unit of analysis is contrained since data are available, over time, for only three states where the same weighting is used in a particular state for more than one year. Analyses are presented for Florida, Illinois, and New Jersey where the results for the equality and wealth neutrality assessments for the weighted pupil unit of analysis are compared to the results for the unweighted pupil unit of analysis.

1. Florida

The equality and wealth neutrality measures for Florida for all three units of analysis appear in Appendix B, Tables B-22 and B-23, for 1973-74 and 1974-75, respectively. Florida uses a rather detailed set of weightings and these are displayed in Table VI-1. Note that there are weightings for grade

TABLE VI-1

Weights for Various Educational Programs in Florida, 1975-76

Basic Programs	
Kindergarten and Grades 1, 2, and 3	1.234
Grades 4 through 9	1.00
Grades 10, 11, and 12	1.10
Special Programs for Exceptional Students	
Educable mentally retarded	2.30
Trainable mentally retarded	3.00
Physically handicapped	3.50
Physical and occupational therapy, part-time	6.00
Speech and hearing therapy, part-time	10.00
Deaf	4.00
Visually handicapped, part-time	10.00
Visually handicapped	3.50
Emotionally disturbed, part-time	7.50
Emotionally disturbed	3.70
Socially maladjusted	2.30
Specific learning disability, part-time	7.50
Specific learning disability	2.30
Gifted, part-time	3.00
Hospital and homebound, part-time	15.00
*Vocational-Technical Programs**	
Vocational Education I	4.26
Vocational Education II	2.64
Vocational Education III	2.18
Vocational Education IV	1.69
Vocational Education V	1.40
Vocational Education VI	1.17
Adult Education Programs	
Adult basic education and adult high school	1.28
Community service	0.675

*Vocational-technical programs are put into one of six categories depending upon the relative cost of providing the program. Most expensive are certain shop courses using a great deal of expensive equipment; least expensive are secretarial courses.

Source: Jack Leppert, Larry Huxel, Walter Garms, and Heber Fuller, "Pupil Weighting Programs in School Finance Reform," in *School Finance Reform: A Legislators' Handbook*, eds. John J. Callahan and William H. Wilken (Washington, D.C.: National Conference of State Legislatures, 1976).

levels and special programs.

The assessments of the equality and wealth neutrality in Florida from 1973-74 to 1974-75 are presented in Table VI-2. The use of the weighted pupil unit of analysis compared to the unweighted pupil unit of analysis changes the assessment of equality and wealth neutrality for selected measures. For the equality measures there are differences for the relative mean deviation, the Gini coefficient as well as the range. For the relative mean deviation and Gini coefficient the unweighted pupil unit of analysis shows more equality between 1973 and 1974 while these two measures for the weighted pupil unit of analysis show less equality. Differences in the other direction can be seen for the range. Thus, depending upon the particular equality measure chosen, the conclusions regarding equality can be different for the two units of analysis.

Similar differences occur for the wealth neutrality measures except here there are differences between the unweighted and weighted units of analysis only for the ELAST W measure. But for Florida, this shows that the equality and wealth neutrality measures, particularly ones that may be more attractive from a value judgment point of view, can contradict one another when the weighted and unweighted pupil units of analysis are compared for specific measures.

2. Illinois

The equality and wealth neutrality measures for the three district types in Illinois for 1972-73 and 1975-76 are displayed in Tables B-27 through B-32. The analysis of equality and wealth neutrality between 1972 and 1975 for all three district types and all three units of analysis were displayed in Section IV, Tables IV-12 through IV-14. The pupil weighting system in Illinois, known as Title I weighted average daily attendance (TWADA), is based on the number and concentration of Title I students in a particular district.[1]

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[1] For more details on the Illinois pupil weighting system see G. Alan Hickrod and Ben C. Hubbard, The 1973 School Finance Reform in Illinois: Quo Jure? Quo Vadis? Illinois State University, Center for the Study of Educational Finance, March, 1978.

TABLE VI-2

STATE - FLORIDA

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL, WEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1973 to 1974		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	MORE Equal
2. Restricted Range	MORE "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	LESS "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	LESS Wlth Neut	LESS Wlth Neut	LESS Wlth Neut
2. Slope - W	LESS " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	MORE " "	MORE " "	MORE " "
6. Hickrod Gini	LESS " "		
7. Elasticity - W	LESS " "	LESS " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

For the equality measures, there are only a couple of differences between the unweighted and weighted units of analysis. The difference in the Unit districts occurs for the permissible variance and in the Secondary districts, the Federal range ratio. There are no differences for the nine equality measures across the two units of analysis in the Elementary districts.

The differences between the weighted and unweighted units of analysis for the wealth neutrality measures in the Unit districts are extensive. Seven of the nine wealth neutrality measures indicate less wealth neutrality in 1975, compared to 1972, using the unweighted pupil unit of analysis and more wealth neutrality using the weighted pupil unit of analysis. The wealth neutrality measures for the Secondary and Elementary district types do not vary according to the unweighted and weighted units of analysis.

In Illinois examples of extensive, minor and no differences across the unweighted and weighted units of analysis can be documented and, therefore, the issue of unit of analysis is important in equity assessment.

3. New Jersey

The final state examined here is New Jersey where data on comparable pupil weightings are available for 1975-76 and 1976-77. The equality and wealth neutrality measures for these two years in New Jersey are displayed in Tables B-55 and B-56.

The pupil weighting system utilized in New Jersey is based on a number of different categories and is displayed in Table IV-3. The assessment of equality and wealth neutrality between 1975-76 and 1976-77 for the three units of analysis are shown in Table VI-4. For this time period in New Jersey the equality measures are the same for the unweighted and weighted pupil units of analysis. For the wealth neutrality measures only SLOPE W2 shows a difference between the

TABLE VI-3

New Jersey Weightings for Categorical Aid Programs as contained in the Public School Education Act of 1975 (N.J.S.A. 18A:7A-20)

Special Education Classes	Additional Cost Factors
Educable	0.53
Trainable	0.95
Orthopedically handicapped	1.27
Neurologically impaired	1.06
Perceptually impaired	0.85
Visually handicapped	1.91
Auditorially handicapped	1.38
Communication handicapped	1.06
Emotionally disturbed	1.27
Socially maladjusted	0.95
Chronically ill	0.85
Multiply handicapped	1.27
Other Classes and Services	
Approved private school tuition	Additional cost factor of the handicap plus 1.0
Supplementary and speech instruction	0.09 based on the number of pupils actually receiving such instruction in the prior school year
Bilingual education	0.16
State compensatory education	0.11
Home instruction	0.006 times the number of hours of instruction actually provided in the prior school year

TABLE VI-4

STATE - NEW JERSEY

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL, WEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1975 to 1976 DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE Wlth Neut	LESS Wlth Neut	LESS Wlth Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	LESS " "	LESS " "
5. Expenditure Difference	MORE " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	LESS " "	LESS " "
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "	LESS " "

two pupil units of analysis. Thus, for one time period in New Jersey there are only minor differences when the weighted compared to the unweighted pupil unit of analysis is employed.

4. Conclusions

The empirical importance of pupil weightings has been documented, even with this limited analysis. The use of a weighted compared to unweighted pupil unit of analysis can change the conclusions drawn from individual and sets of equality and wealth neutrality measures when used to assess a state over time.

It should be pointed out that the pupil weighting systems significantly influence the pupil counts in Florida (1.41 million (unweighted) to 1.99 million (weighted)) and Illinois (Unit: 1.27 million (unweighted) to 1.58 million (weighted)) more so than in New Jersey (1.40 million (unweighted) to 1.49 million (weighted)). This probably accounts, to some degree, for the greater differences between the two pupil units of analysis in Florida and Illinois. But the issues surrounding student weightings have only been touched upon here and are clearly worthy of further investigation.

B. Alternative Revenue Variables

The dependent variable used in most instances in this report is local and state revenues excluding revenues for debt service and capital. In Section II it was pointed out that a number of alternative dependent variables can be used in equity analysis and in this part two alternative revenue variables are utilized. The effects of the alternative revenue variables are investigated by comparing the analyses of equality and revenue neutrality in a number of states over time when different revenue variables are employed. First Florida, New Mexico, and Texas are considered, then New Jersey.

For Florida, New Mexico and Texas, the revenue variable utilized in the report includes local revenues for debt service and capital. In this section the alternative revenue variable used for these three states is local and state revenues less expenditures for capital. Note that this is not the same as lcoal and state revenues excluding revenues for debt service and capital since capital expenditures are partly debt financed.[2] While the alternative revenue variable analyzed in this section for Florida, New Mexico, and Texas is not a preferable one for equity analysis, it can provide some indication of the sensitivity of the equality and wealth neutrality measures to an alternative specification of the revenue variable.

The equality and wealth neutrality measures for Florida, New Mexico, and Texas using local and state revenues less capital expenditures are displayed in Tables VI-5 through VI-13. The data for these three states that are utilized in the other sections of the report are in Appendix B. The analyses of equality and wealth neutrality for the three states with the alternative revenue variable are shown in Tables VI-14 through VI-17. The analogous tables for revenue variable utilized in the report are included in Section IV.

When the tables presented in this section are compared with their counterparts in Section IV, the differences are extensive. There are six intertemporal comparisons (two for Florida, three for New Mexico, and one for Texas) and nine equality measures for each intertemporal comparison yeilding 54 (6 x 9) equality measures for each unit of analysis that can be compared with different revenue variables. For the district unit of analysis 21 of the 54 or 39% of the equality measures yield different conclusions for the different revenue variables. A conclusion is considered different or reversed when the same measure shows more equality for one revenue variable and less equality for the other revenue variable.

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[2] Capital expenditures are likely to be very lumpy and either vastly exceed or be considerably less than local revenues for debt service and capital.

TABLE VI-5

STATE -- FLA
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1369723
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	845.43000	863.58000	0.00000
2. RANGE	1066.30000	1066.30000	0.00000
3. RES RANGE	390.75000	359.94000	0.00000
4. FED R R	.62060	.54380	0.00000
5. REL MN DEV	.11650	.09513	0.00000
6. PERM VAR	.86478	.87871	0.00000
7. VAR	21769.00000	10657.00000	0.00000
8. COEF VAR	.17452	.11954	0.00000
9. STD DEV LGS	.29600	.13800	0.00000
10. GINI	.08556	.06577	0.00000
11. SIM CORR	.31583	.64354	0.00000
12. SLOPE W	2.58630	3.86760	0.00000
13. SLOPE W2	1.95070	3.89090	0.00000
14. SLOPE W3	1.33410	5.69170	0.00000
15. EXP DIF	61.97900	169.64000	0.00000
16. WICK GINI	.00608	0.00000	0.00000
17. MEAN W	35.97500	38.41300	0.00000
18. STD DEV W	18.01700	17.17800	0.00000
19. ELAST W	.11005	.17204	0.00000
20. ELAST W2	.08301	.17307	0.00000
21. ELAST W3	.05677	.25317	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Local and state revenues less capital expenditures.
3. Wealth: Equalized Assessed value.
4. Districts: All

STATE -- FLA
YEAR -- 1973
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1397320
NUMBER OF WEIGHTED PUPILS -- 188982

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTE PUPIL
1.	MEAN EXP	997.44000	1065.70000	787.95000
2.	RANGE	1625.40000	1625.40000	1223.30000
3.	RES RANGE	577.71000	434.24000	285.31000
4.	FED R R	.77270	.52730	.49960
5.	REL MN DEV	.14461	.11907	.12073
6.	PERM VAR	.85502	.90687	.90065
7.	VAR	49508.00000	24912.00000	10400.00000
8.	COEF VAR	.22308	.14811	.12943
9.	STD DEV LGS	.86200	.38100	.36000
10.	GINI	.10575	.07895	.08481
11.	SIM CORR	.09711	.40312	.32190
12.	SLOPE W	.64400	2.64880	1.90540
13.	SLOPE W2	.92499	4.08280	3.12890
14.	SLOPE W3	.95058	3.88740	2.95850
15.	EXP DIF	65.09700	194.81000	103.84000
16.	WICK GINI	.01319	.00826	.01056
17.	MEAN W	49.98000	54.59200	40.36500
18.	STD DEV W	33.53300	24.02100	17.22900
19.	ELAST W	.03227	.13569	.09761
20.	ELAST W2	.04635	.20915	.16029
21.	ELAST W3	.04763	.19914	.15054

Variable descriptions:

1. a. Pupils (unweighted): See Table VI-5 (Florida, 1972).
   b. Pupils (weighted): Weighted FTE
2. Revenues: See Table VI-5 (Florida, 1972).
3. Wealth: See Table VI-5 (Florida, 1972).
4. Districts: See Table VI-5 (Florida, 1972).

TABLE VI-7

STATE -- FLA
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1416506
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY		UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1141.90000	1178.90000	0.00000
2.	RANGE	795.83000	795.83000	0.00000
3.	RES RANGE	538.57000	391.57000	0.00000
4.	FED R R	.62230	.40580	0.00000
5.	REL MN DEV	.12314	.08991	0.00000
6.	PERM VAR	.87256	.94090	0.00000
7.	VAR	31167.00000	16718.00000	0.00000
8.	COEF VAR	.15461	.10968	0.00000
9.	STD DEV LGS	.16300	.11500	0.00000
10.	GINI	.08674	.06046	0.00000
11.	SIM CORR	.55536	.59284	0.00000
12.	SLOPE W	2.53720	2.42150	0.00000
13.	SLOPE W2	1.75460	2.37560	0.00000
14.	SLOPE W3	2.16180	2.00950	0.00000
15.	EXP DIF	141.64000	138.26000	0.00000
16.	WICK GINI	.00846	.00690	0.00000
17.	MEAN W	69.10400	79.96100	0.00000
18.	STD DEV W	38.64300	31.65500	0.00000
19.	ELAST W	.15354	.16424	0.00000
20.	ELAST W2	.10618	.16113	0.00000
21.	ELAST W3	.13082	.13630	0.00000

Variable descriptions:

See Table VI-5 (Florida, 1972).

TABLE VI-8

STATE -- N M

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88

NUMBER OF PUPILS -- 276155

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTE PUPIL
1.	MEAN EXP	777.19000	653.67000	0.00000
2.	RANGE	1343.90000	1343.90000	0.00000
3.	RES RANGE	910.04000	350.05000	0.00000
4.	FED R R	2.27680	.73170	0.00000
5.	REL MN DEV	.23564	.13386	0.00000
6.	PERM VAR	.80947	.89210	0.00000
7.	VAR	65234.00000	16030.00000	0.00000
8.	COEF VAR	.32863	.19369	0.00000
9.	STD DEV LGS	.35800	.21200	0.00000
10.	GINI	.17372	.09625	0.00000
11.	SIM CORR	.40551	.29945	0.00000
12.	SLOPE W	1.83690	1.18200	0.00000
13.	SLOPE W2	2.13260	.63866	0.00000
14.	SLOPE W3	2.25650	-.63270	0.00000
15.	EXP DIF	268.83000	-46.87200	0.00000
16.	WICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	68.31800	46.36000	0.00000
18.	STD DEV W	56.38300	32.07600	0.00000
19.	ELAST W	.16147	.08383	0.00000
20.	ELAST W2	.18746	.04530	0.00000
21.	ELAST W3	.19836	-.04487	0.00000

Variable descriptions:

1. Pupils (unweighted): Average Daily Membership (ADM).
2. Revenues: Local and state revenue plus Federal impact aid (PL 874 revenue) le-s capital expenditures.
3. Wealth: Equalized assessed value.
4. Districts: All.

TABLE VI-9

STATE -- N M	NUMBER OF DISTRICTS -- 88
YEAR -- 1973	NUMBER OF PUPILS -- 273063
DISTRICT TYPE -- 1	NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	894.99000	659.08000	0.00000
2.	RANGE	3534.30000	3534.30000	0.00000
3.	RES RANGE	1139.70000	350.26000	0.00000
4.	FED R R	2.62580	.66100	0.00000
5.	REL MN DEV	.29588	.19380	0.00000
6.	PERM VAR	.80264	.86437	0.00000
7.	VAR	172570.00000	32356.00000	0.00000
8.	COEF VAR	.49415	.27292	0.00000
9.	STD DEV LGS	.80700	.31600	0.00000
10.	GINI	.21547	.12959	0.00000
11.	SIM CORR	.25684	.19714	0.00000
12.	SLOPE W	1.65230	.97787	0.00000
13.	SLOPE W2	1.87260	-.43845	0.00000
14.	SLOPE W3	1.85660	-1.39250	0.00000
15.	EXP DIF	242.39000	-109.53000	0.00000
16.	WICK GINI	0.00000	.00621	0.00000
17.	MEAN W	76.21200	51.26800	0.00000
18.	STD DEV W	64.57400	36.26300	0.00000
19.	ELAST W	.14070	.07607	0.00000
20.	ELAST W2	.15946	-.03411	0.00000
21.	ELAST W3	.15810	-.10832	0.00000

Variable descriptions:

See Table VI-8 (New Mexico, 1973).

TABLE VI-10

STATE -- N M
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88
NUMBER OF PUPILS -- 273743
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTE PUPIL
1.	MEAN EXP	948.27000	713.64000	0.00000
2.	RANGE	2486.90000	2486.90000	0.00000
3.	RES RANGE	1192.70000	547.84000	0.00000
4.	FED R R	2.42530	1.04860	0.00000
5.	REL MN DEV	.32019	.19548	0.00000
6.	PERM VAR	.74578	.84165	0.00000
7.	VAR	176460.00000	40638.00000	0.00000
8.	COEF VAR	.44299	.28248	0.00000
9.	STD DEV LGS	1.08800	.53000	0.00000
10.	GINI	.23399	.13418	0.00000
11.	SIM CORR	.33217	.36311	0.00000
12.	SLOPE W	1.74740	1.56600	0.00000
13.	SLOPE W2	1.88160	.94939	0.00000
14.	SLOPE W3	1.86090	.45701	0.00000
15.	EXP DIF	293.80000	38.03900	0.00000
16.	WICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	86.95700	57.30900	0.00000
18.	STD DEV W	79.85200	46.74400	0.00000
19.	ELAST W	.16024	.12576	0.00000
20.	ELAST W2	.17254	.07624	0.00000
21.	ELAST W3	.17065	.03670	0.00000

Variable descriptions:

See Table VI-8 (New Mexico, 1973).

TABLE VI-11

STATE -- N M
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88
NUMBER OF PUPILS -- 265374
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1036.40000	785.44000	0.00000
2.	RANGE	2331.50000	2331.50000	0.00000
3.	RES RANGE	1695.80000	590.41000	0.00000
4.	FED R R	6.29570	1.29710	0.00000
5.	REL MN DEV	.33095	.17193	0.00000
6.	PERM VAR	.70474	.72473	0.00000
7.	VAR	214720.00000	47454.00000	0.00000
8.	COEF VAR	.44712	.27735	0.00000
9.	STD DEV LGS	.94400	.52600	0.00000
10.	GINI	.24319	.13313	0.00000
11.	SIM CORR	.26080	.22432	0.00000
12.	SLOPE W	1.34840	.91915	0.00000
13.	SLOPE W2	1.77530	.02905	0.00000
14.	SLOPE W3	2.01240	-.96580	0.00000
15.	EXP DIF	386.19000	-102.69000	0.00000
16.	WICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	94.61400	64.11600	0.00000
18.	STD DEV W	89.62400	53.16500	0.00000
19.	ELAST W	.12310	.07503	0.00000
20.	ELAST W2	.16207	.00237	0.00000
21.	ELAST W3	.18371	-.07884	0.00000

Variable descriptions:

See Table VI-8 (New Mexico, 1973).

TABLE VI-12

STATE -- TEXAS
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 1090
NUMBER OF PUPILS -- 2531541
NUMBER OF WEIGHTED PUPILS --

		UNIT OF ANALYSIS		
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTE PUPIL
1.	MEAN EXP	1078.10000	875.49000	0.00000
2.	RANGE	33390.00000	33390.00000	0.00000
3.	RES RANGE	1582.80000	789.24000	0.00000
4.	FED R R	3.73540	1.66940	0.00000
5.	REL MN DEV	.39814	.22741	0.00000
6.	PERM VAR	.72680	.76252	0.00000
7.	VAR	1311000.00000	77252.00000	0.00000
8.	COEF VAR	1.06210	.31747	0.00000
9.	STD DEV LGS	.99400	.49400	0.00000
10.	GINI	.29962	.16235	0.00000
11.	SIM CORR	.68282	.45616	0.00000
12.	SLOPE W	.85304	1.24360	0.00000
13.	SLOPE W2	1.21220	1.43750	0.00000
14.	SLOPE W3	.46914	1.70360	0.00000
15.	EXP DIF	862.43000	347.21000	0.00000
16.	WICK GINI	.00294	.02634	0.00000
17.	MEAN W	275.08000	93.41400	0.00000
18.	STD DEV W	916.82000	101.89000	0.00000
19.	ELAST W	.21766	.13269	0.00000
20.	ELAST W2	.30930	.15338	0.00000
21.	ELAST W3	.11970	.18177	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Local and state revenues less capital expenditures.
3. Wealth: Governor's Office equalized value in 1975 per 1975-76 ADA.
4. Districts: All.

TABLE VI-13

STATE -- TEXAS	NUMBER OF DISTRICTS -- 1090
YEAR -- 1975	NUMBER OF PUPILS -- 2536472
DISTRICT TYPE -- 1	NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1336.00000	1045.30000	0.00000
2.	RANGE	68691.00000	68691.00000	0.00000
3.	RES RANGE	1741.40000	878.16000	0.00000
4.	FED R R	2.80280	1.50840	0.00000
5.	REL MN DEV	.37917	.19070	0.00000
6.	PERM VAR	.77749	.78572	0.00000
7.	VAR	4653700.00000	98072.00000	0.00000
8.	COEF VAR	1.61480	.29961	0.00000
9.	STD DEV LGS	.79800	.55300	0.00000
10.	GINI	.27736	.14784	0.00000
11.	SIM CORR	.66348	.45485	0.00000
12.	SLOPE W	1.56130	1.42530	0.00000
13.	SLOPE W2	.93191	1.49140	0.00000
14.	SLOPE W3	.57449	1.87810	0.00000
15.	EXP DIF	1038.00000	374.23000	0.00000
16.	WICK GINI	.00127	.02505	0.00000
17.	MEAN W	275.08000	93.52700	0.00000
18.	STD DEV W	916.82000	99.61300	0.00000
19.	ELAST W	.32147	.12753	0.00000
20.	ELAST W2	.19188	.13344	0.00000
21.	ELAST W3	.11829	.16804	0.00000

Variable descriptions:

See Table VI-12 (Texas, 1974).

TABLE VI-14

STATE - FLORIDA*

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1972 to 1975		Change from 1973 to 1975	
	DISTRICT	UNWEIGHTED PUPIL	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY				
1. Range	MORE Equal	MORE Equal	MORE Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	MORE "	MORE "
3. Federal Range Ratio	LESS "	MORE "	MORE "	MORE "
4. Relative Mean Deviation	LESS "	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	MORE "	MORE "
7. Coefficient of Variation	MORE "	MORE "	MORE "	MORE "
8. Standard Deviation of Logarithms	MORE "	MORE "	MORE "	MORE "
9. Gini Coefficient	LESS "	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY				
1. Simple Correlation	LESS With Neut	MORE With Neut	LESS With Neut	LESS With Ne
2. Slope - W	MORE " "	MORE " "	LESS " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	LESS " "	MORE " "
4. Slope - W, W^2, W^3	LESS " "	MORE " "	LESS " "	MORE " "
5. Expenditure Difference	LESS " "	MORE " "	LESS " "	MORE " "
6. Hickrod Gini	LESS " "		MORE " "	MORE " "
7. Elasticity - W	LESS " "	MORE " "	LESS " "	LESS " "
8. Elasticity -W, W^2	LESS " "	MORE " "	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3	LESS " "	MORE " "	LESS " "	MORE " "

*Capital expenditures deducted from state and local revenues.

TABLE VI-15

STATE - NEW MEXICO*

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from:		
	1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	MORE "	MORE Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	LESS "	LESS "
5. Permissible Variance	LESS "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	LESS "	MORE "	LESS "
8. Standard Deviation of Logarithms	LESS "	LESS "	MORE "
9. Gini Coefficient	LESS "	LESS "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE Wlth Neut	LESS Wlth Neut	MORE Wlth Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini			
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2	MORE " "	LESS " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	LESS " "	LESS " "

*Capital expenditures deducted from state and local revenues.

TABLE VI-16

STATE - NEW MEXICO*

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from:		
	1972 to 1975	1973 to 1975	1974 to 1975
A. EQUALITY			
1. Range	LESS Equal	MORE Equal	MORE Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	LESS "	LESS "	LESS "
4. Relative Mean Deviation	LESS "	MORE "	MORE "
5. Permissible Variance	LESS "	LESS "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	LESS "	LESS "	MORE "
8. Standard Deviation of Logarithms	LESS "	LESS "	MORE "
9. Gini Coefficient	LESS "	LESS "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE Wlth Neut	LESS Wlth Neut	MORE Wlth Neut
2. Slope - W	MORE " "	MORE " "	MORE " "
3. Slope - W, W^2 **	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3 **	LESS " "	MORE " "	LESS " "
5. Expenditure Difference **	LESS " "	MORE " "	LESS " "
6. Hickrod Gini			
7. Elasticity - W	MORE " "	MORE " "	MORE " "
8. Elasticity -W, W^2 **	MORE " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3**	LESS " "	MORE " "	LESS " "

*Capital expenditures deducted from state and local revenues.

**Negative wealth neutrality measures evaluated as positive values; i.e. more negative is not more wealth neutral.

TABLE VI-17

STATE - TEXAS*

UNIT OF ANALYSIS - DISTRICT, UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Change from 1974 to 1975	
	DISTRICT	UNWEIGHTED PUPIL
A. EQUALITY		
1. Range	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "
4. Relative Mean Deviation	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "
6. Variance	LESS "	LESS "
7. Coefficient of Variation	LESS "	MORE "
8. Standard Deviation of Logarithms	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "
B. WEALTH NEUTRALITY		
1. Simple Correlation	MORE With Neut	MORE With Neut
2. Slope - W	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	LESS " "
4. Slope - W, W^2, W^3	LESS " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "
7. Elasticity - W	LESS " "	MORE " "
8. Elasticity -W, W^2	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "

*Capital expenditures deducted from state and local revenues.

For the unweighted pupil unit of anlaysis 26 of the 54 or 48% of the equality variables in the six intertemporal comparisons are reversed for one revenue variable compared to the other. The distribution of the differences between the measures among the six intertemporal comparisons are shown in Table VI-18.

There are also widespread differences for the wealth neutrality measures. Since the Hickrod Gini was not computed in all instances, there are somewhat less than 54 comparisons for each unit of analysis. For the district unit of analysis, the conclusions for the wealth neutrality measures are reversed in 20 of the 51 or 39% of the cases and for the unweighted pupil unit of analysis the conclusions are different in 14 of 49 or 29% of the cases. Again, the distribution of the differences among the six intertemporal comparisons are displayed in Table VI-18.

Capital expenditures are, by their nature, quite lumpy and bound to differ considerably across districts, so that in some ways, this is not the most appropriate sensitivity analysis for the revenue variable. Nevertheless, the extent of the reversals are such that we could conjecture that the inclusion of categoricals or Federal revenues could make a difference when a state is being evaluated over time. Obviously, it has been shown that particular attention should be paid to the treatment of capital expenditures.

For New Jersey, the alternative revenue variable is different from the one used for Florida, New Mexico, and Texas. In the previous analyses in this report, the revenue variable for New Jersey was local and state revenues excluding revenues for debt service and capital. In this part, local and state revenues including revenues for debt service and capital are analyzed in New Jersey over time and the results for this alternative revenue variable are compared with the results for the local and state revenues excluding revenues

TABLE VI-18

NUMBER OF EQUALITY AND WEALTH NEUTRALITY MEASURES THAT ARE DIFFERENT, OVERTIME, FOR ALTERNATIVE REVENUE VARIABLES

	Florida 72 to 75	Florida 73 to 75	NM 72 to 75	NM 73 to 75	NM 74 to 75	Texas 74 to 75	TOTAL
Equality Measures							
District Unit of Analysis	4/9	1/9	1/9	6/9	7/9	2/9	21/54
Unwt Pupil Unit of Analysis	6/9	4/9	5/9	6/9	4/9	1/9	26/54
Wealth Neutrality Measures							
District Unit of Analysis	5/9	6/9	0/8	4/8	3/8	2/9	20/51
Unwt Pupil Unit of Analysis	1/8	3/8	0/8	5/8	3/8	2/9	14/49

for debt service and capital, that were analyzed earlier in the report. The equality and wealth neutrality for 1974-75, 1975-76, 1976-77, and 1977-78 with local and state revenues including revenues for debt service and capital as the dependent variable are presented in Tables VI-19 through VI-22. The intertemporal comparisons for these data are displayed in Tables VI-23 and VI-24, for the district and unweighted pupil units of analysis, respectively.

Since the differences between the two revenue variables are less drastic than for Florida, New Mexico, and Texas, fewer differences, or reversed measures, in the three intertemporal comparisons might be expected. When the results in Tables VI-23 and VI-24 are compared to those in Tables IV-24 and IV-25 fewer reversed conclusions do occur. For the 27 equality measures in the three intertemporal comparisons where the district is the unit of analysis only 2 of the 27 or 7% of the cases are reversed; for the unweighted pupil unit of analysis there are different conclusions in 4 of the 27 or 15% of the cases. These figures are somewhat lower than for the three states examined earlier.

For the wealth neutrality measures there are differences between the conclusions when revenues for debt service and capital are included and excluded in 2 of the 27 or 7% of the cases for the district as the unit of analysis and in 8 of the 25 or 32% of the cases when the unweighted pupil is the unit of analysis. These figures are still generally lower than was observed for Florida, New Mexico, and Texas but these are some differences nonetheless.[3]

The analysis in this part has demonstrated quite clearly that attention must be paid to the dependent variable in equity analysis. The conclusions in a state over time can change for the equality and wealth neutrality measures examined in this report when different revenue variables are utilized. Although

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[3] Recall that capital expenditures will probably be more lumpy than local and state revenues for debt service and capital.

TABLE VI-19

STATE -- N J
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 578
NUMBER OF PUPILS -- 1449180
NUMBER OF WEIGHTED PUPILS --1762596

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1510.90000	1497.70000	1231.50000
2. RANGE	4340.80000	4340.80000	3617.30000
3. RES RANGE	1136.10000	927.08000	901.30000
4. FED R R	1.11440	.83540	1.07840
5. REL MN DEV	.18472	.15550	.18211
6. PERM VAR	.84696	.86300	.86735
7. VAR	151890.00000	91379.00000	79868.00000
8. COEF VAR	.25794	.20184	.22949
9. STD DEV LGS	.29580	.21580	.45570
10. GINI	.13500	.11000	.12700
11. SIM CORR	.39040	.42410	.60870
12. SLOPE W	2.30110	3.82050	5.66340
13. SLOPE W2	4.51900	4.90790	7.35640
14. SLOPE W3	4.96960	4.99840	7.65610
15. EXP DIF	657.21000	535.49000	465.07000
16. HICK GINI	.07500	0.00000	.09100
17. MEAN W	76.60400	60.47000	49.72200
18. STD DEV W	66.12300	33.56000	30.37300
19. ELAST W	.11667	.15425	.22866
20. ELAST W2	.22912	.19816	.29702
21. ELAST W3	.25196	.20181	.30912

Variable descriptions:

1. a. Pupils (unweighted): The number of children who reside in the school district and we enrolled on September 30 in public schools either in their own district or in a district to which the school board pays tuition. This count does not include students sent to county vocational schools.

   b. Pupils (weighted): The sum of unweighted pupils plus .75 for each AFDC student.

2. Revenues: Sum of locally-raised revenues for operating expenditures and state aid for operating expenditures. Locally-raised revenues for capital and debt expenditures are included.

3. Wealth: Annual Equalized Property Valuation.

4. Districts: Includes all districts with resident pupils but excludes county vocational school districts, county special services district, and three school districts with extraordinarily high property wealth and negligible student counts (Teterboro Boro, Rockleigh, and Stone Harbor Boro).

TABLE VI-20

STATE -- N J

YEAR -- 1975

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 575

NUMBER OF PUPILS -- 1433045

NUMBER OF WEIGHTED PUPILS -- 1509071

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1615.70000	1613.20000	1531.90000
2.	RANGE	2860.40000	2860.40000	2681.80000
3.	RES RANGE	1047.00000	1202.00000	1074.70000
4.	FED R R	1.09720	.90871	1.01570
5.	REL MN DEV	.17691	.15219	.15713
6.	PERM VAR	.84650	.86752	.86725
7.	VAR	106990.00000	140520.00000	101720.00000
8.	COEF VAR	.20245	.23237	.20819
9.	STD DEV LGS	.23820	.18710	.24320
10.	GINI	.12600	.10900	.12200
11.	SIM CORR	.34830	.44070	.48360
12.	SLOPE W	1.71500	3.79690	4.19130
13.	SLOPE W2	3.97350	5.08600	5.62630
14.	SLOPE W3	4.75050	5.19520	5.80750
15.	EXP DIF	723.39000	394.52000	427.45000
16.	HICK GINI	.06700	.05800	.06600
17.	MEAN W	85.90000	66.85300	63.48500
18.	STD DEV W	76.13900	37.97000	36.80100
19.	ELAST W	.09118	.15735	.17370
20.	ELAST W2	.21125	.21077	.23317
21.	ELAST W3	.25256	.21530	.24067

Variable descriptions:

1. a. Pupils (unweighted): See Table VI-19 (New Jersey, 1974).

   b. Pupils (weighted): Unweighted pupils plus weighted pupils as per weightings from Sec. 10A: 7A-20 of the Public School Education Act of 1975 .

2. Revenues: See Table VI-19 (New Jersey, 1974).

3. Wealth: See Table VI-19 (New Jersey, 1974).

4. Districts: See Table VI-19 (New Jersey, 1974).

TABLE VI-21

STATE -- N J

YEAR -- 1976

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 576

NUMBER OF PUPILS -- 1401146

NUMBER OF WEIGHTED PUPILS -- 1492660

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1797.60000	1752.50000	1645.10000
2.	RANGE	5050.80000	5050.80000	5052.20000
3.	RES RANGE	1158.10000	1120.60000	1074.00000
4.	FED R R	.90540	.90798	.91224
5.	REL MN DEV	.16322	.14574	.15566
6.	PERM VAR	.85808	.86922	.87062
7.	VAR	162990.00000	106690.00000	102930.00000
8.	COEF VAR	.22459	.18638	.19502
9.	STD DEV LGS	.13180	.10110	.17470
10.	GINI	.11600	.10200	.10800
11.	SIM CORR	.31470	.50920	.54610
12.	SLOPE W	1.42120	3.93950	4.33190
13.	SLOPE W2	3.29210	5.35690	5.87810
14.	SLOPE W3	3.96170	5.64090	6.22810
15.	EXP DIF	708.24000	476.34000	503.75000
16.	HICK GINI	.05600	.06400	.07200
17.	MEAN W	94.93100	72.68600	68.23000
18.	STD DEV W	89.38500	42.22200	40.44200
19.	ELAST W	.07505	.16339	.17966
20.	ELAST W2	.17386	.22218	.24379
21.	ELAST W3	.20922	.23396	.25831

Variable descriptions:

1. a. Pupils (unweighted): See Table VI-19 (New Jersey, 1974).
   b. Pupils (weighted): See Table VI-20 (New Jersey, 1975).
2. Revenues: See Table VI-19 (New Jersey, 1974).
3. Wealth: See Table VI-19 (New Jersey, 1974).
4. Districts: See Table VI-19 (New Jersey, 1974).

TABLE VI-22

STATE -- N J
YEAR -- 1977
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 575
NUMBER OF PUPILS --1359189
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1974.20000	1914.40000	0.00000
2. RANGE	6084.40000	6084.40000	0.00000
3. RES RANGE	1285.90000	1179.70000	0.00000
4. FED R R	.92744	.84340	0.00000
5. REL MN DEV	.15987	.14914	0.00000
6. PERM VAR	.86184	.86755	0.00000
7. VAR	204520.00000	147010.00000	0.00000
8. COEF VAR	.22908	.20028	0.00000
9. STD DEV LGS	.17690	.15860	0.00000
10. GINI	.11500	.10700	0.00000
11. SIM CORR	.37230	.47710	0.00000
12. SLOPE W	1.72150	3.87980	0.00000
13. SLOPE W2	4.00630	4.80810	0.00000
14. SLOPE W3	4.56020	4.46010	0.00000
15. EXP DIF	891.94000	872.36000	0.00000
16. HICK GINI	.06200	.06100	0.00000
17. MEAN W	104.51000	79.26600	0.00000
18. STD DEV W	97.79700	47.14500	0.00000
19. ELAST W	.09113	.16064	0.00000
20. ELAST W2	.21209	.19908	0.00000
21. ELAST W3	.24141	.18467	0.00000

Variable descriptions:

1. Pupils (unweighted): See Table VI-19 (New Jersey, 1974).
2. Revenues: See Table VI-19 (New Jersey, 1974).
3. Wealth: See Table VI-19 (New Jersey, 1974).
4. Districts: See Table VI-19 (New Jersey, 1974).

TABLE VI-23

STATE - NEW JERSEY*

UNIT OF ANALYSIS - DISTRICT

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from: 1974 to 1977	1975 to 1977	1976 to 1977
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	LESS "	LESS "
3. Federal Range Ratio	MORE "	MORE "	LESS "
4. Relative Mean Deviation	MORE "	MORE "	MORE "
5. Permissible Variance	MORE "	MORE "	MORE "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	LESS "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "	MORE "
B. WEALTH NEUTRALITY			
1. Simple Correlation	MORE With Neut	LESS With Neut	LESS With Neut
2. Slope - W	MORE " "	LESS " "	LESS " "
3. Slope - W, W^2	MORE " "	LESS " "	LESS " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	LESS " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini	MORE " "	MORE " "	LESS " "
7. Elasticity - W	MORE " "	MORE " "	LESS " "
8. Elasticity -W, W^2	MORE " "	LESS " "	LESS " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	LESS " "

*Locally raised revenues for debt service and capital included in revenues.

TABLE VI-24

STATE - NEW JERSEY*

UNIT OF ANALYSIS - UNWEIGHTED PUPIL

DISTRICT TYPE - ALL

Measure of Equality and Wealth Neutrality	Changes from:		
	1974 to 1977	1975 to 1977	1976 to 1977
A. EQUALITY			
1. Range	LESS Equal	LESS Equal	LESS Equal
2. Restricted Range	LESS "	MORE "	LESS "
3. Federal Range Ratio	LESS "	MORE "	MORE "
4. Relative Mean Deviation	LESS "	LESS "	MORE "
5. Permissible Variance	MORE "	MORE "	LESS "
6. Variance	LESS "	LESS "	LESS "
7. Coefficient of Variation	MORE "	MORE "	LESS "
8. Standard Deviation of Logarithms	MORE "	MORE "	LESS "
9. Gini Coefficient	MORE "	MORE "	LESS "
B. WEALTH NEUTRALITY			
1. Simple Correlation	LESS With Neut	LESS With Neut	MORE With Neut
2. Slope - W	LESS " "	LESS " "	MORE " "
3. Slope - W, W^2	MORE " "	MORE " "	MORE " "
4. Slope - W, W^2, W^3	MORE " "	MORE " "	MORE " "
5. Expenditure Difference	LESS " "	LESS " "	LESS " "
6. Hickrod Gini		LESS " "	MORE " "
7. Elasticity - W	LESS " "	LESS " "	MORE " "
8. Elasticity -W, W^2	LESS " "	MORE " "	MORE " "
9. Elasticity - W, W^2, W^3	MORE " "	MORE " "	MORE " "

*Locally raised revenues for debt service and capital included in revenues.

alternatives such as total revenues or current operating expenditures or local plus general state aid were not utilized in this sensitivity analysis, the results do tend to indicate that the conclusions drawn from an analysis of equality or wealth neutrality of a state over time is highly dependent on the particular dependent variable utilized.

C. New York City - Separate Analyses of Big Cities

The analysis of school finance in general, and educational equity in particular, in certain states may be more difficult due to the existent of one or two large cities that contain a significant portion of the pupils in a state. Large cities can pose particular problems for several reasons.

First, educational needs and production may be so different in large cities that the educational process should not be compared with the process in the rest of the state. Second, certain large cities may be financed either implicitly or explicitly "out of formula" due to educational differences or political demands.

Third, since many analyses of school finance utilize district level data, neither the district nor pupil units of analysis are entirely satisfactory when one or two large cities comprise a significant part of the state. If the district level of analysis is utilized, the big city "counts" the same as all other districts in the state and this is not representative o~~r~~f reality. If the pupil unit of anlaysis is employed it appears as though the state has a large number of pupils at the spending level of the city and the "mixture" of the big city and the rest of the state, in the data sense, may produce statistical averaging that is not appropriate.

One way out of this dilemma is to analyze the data for a state with and without the big cities, a practice that is common among school finance researchers.

Through this procedure the equity in the state can be compared to the equity in the state without the big city in order to more accurately present the situation in the state. Ideally this analysis should be supplemented with analyses that probe within the city's borders; many of the larger cities serve more pupils than many of the smaller states.

As an example, data have been presented for New York State with and without New York City and the equality and wealth neutrality data for New York State without New York City are presented in Table VI-25. This can be compared with New York State (with New York City) which is presented in Appendix B, Table B-64. It is only meaningful to compare the pupil units of analysis since differences would not be expected with the district unit of analysis.

In this particular case the changes are not very dramatic. For the most part, New York State appears to be somewhat more equal when New York City is included in the unweighted and weighted pupil units of analysis. For wealth neutrality, it is not clearcut whether New York is more wealth neutral with or without New York City in the data base.

This analysis is not meant to produce any conclusions about the particular effects of excluding large cities from an assessment of equality and wealth neutrality. The results presented here are specific to New York State in 1975. In fact, in certain states it might be expected that the differences could be quite dramatic. The intention of this discussion is to show that certain states may be though of in two different ways; both including the large cities in the state and excluding them. Analysis of equality and wealth neutrality in a state may be more sensitive if it is performed both ways.

TABLE VI-25

STATE -- N Y WITHOUT NYC
NUMBER OF DISTRICTS -- 704

YEAR -- 1975
NUMBER OF PUPILS -- 2129187

DISTRICT TYPE -- 1
NUMBER OF WEIGHTED PUPILS -- 2226531

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	2064.60000	2099.60000	2007.80000
2.	RANGE	7233.90000	7233.90000	6922.90000
3.	RES RANGE	2276.50000	1907.80000	1899.80000
4.	FED R R	1.56370	1.27440	1.31870
5.	REL MN DEV	.25742	.20832	.21333
6.	PERM VAR	.90617	.86696	.88768
7.	VAR	646220.00000	377320.00000	357090.00000
8.	COEF VAR	.38937	.29256	.29762
9.	STD DEV LGS	.30580	.27460	.26870
10.	GINI	.17100	.14500	.14800
11.	SIM CORR	.80650	.78670	.78910
12.	SLOPE W	9.36760	15.38500	15.32000
13.	SLOPE W2	14.00100	17.87700	18.03700
14.	SLOPE W3	15.25300	18.51500	18.66100
15.	EXP DIF	2111.40000	1163.10000	1134.00000
16.	WICK GINI	.14900	.11900	.12000
17.	MEAN W	60.05000	52.69000	50.38700
18.	STD DEV W	69.21200	51.40900	50.38800
19.	ELAST W	.27246	.38609	.38948
20.	ELAST W2	.40723	.44863	.45265
21.	ELAST W3	.44364	.46464	.46831

Variable descriptions:

1. a. Pupils (unweighted): The sum of pupils in Average Daily Attendance for grades 1-12 plus 1/2 the pupils in kindergarten. This is a district count.

   b. Pupils (weighted): The total aidable Pupil Units (TAPU) in the state which is made up of 13 separate categories of students. Weightings are applied for special education needs (students scoring low in the State proficiency exam), full day kindergarten and grades 1-6, grades 7-12, 1/2 day kindergarten, summer school, and evening school. Pupils in classes for the severely handicapped are excluded; students in occupational classes receive only their secondary weight.

2. Revenues: The sum of total local levies, total operating aid paid, transportation and, reorganization incentive aid, severely handicapped aid (to the Big 5) and occupational education aid (to the Big 5).

3. Wealth: Full Value of Taxable Real property for 1974 (as equalized by the State).

4. Districts: Only school districts having at least 8 professional staff or more are included in the analyses EXCEPT NEW YORK CITY IS EXCLUDED INTENTIONALLY. Corning has been omitted because the state data tapes contained erroneous information.

D. Observations on Multiple District Types

The purpose of these brief comments is to reinforce the point that states comprised of districts that serve different grade levels, multiple district types, should be analyzed in such a way that these multiple district types are taken into account.

There may be a proceudre to actually manipulate the data in a state with multiple district types in order to simulate a single district type throughout the state but this is not a simple procedure and is rarely utilized. However due to the nature of most equity measures, meaningful analyses might not be produced if the equality or wealth neutrality meausres are computed separately and then averaged. This is so because the equality or wealth neutrality of a group of districts is not the same thing as the sum of the equality or wealth neutrality measures. Furthermore, the examination of states with multiple district types cannot be limited to K-12 (Unit) districts alone since the equality or wealth neutrality of a state may be significantly influenced by Secondary or Elementary districts.

When states are being examined over time, the most methodologically sound procedure appears to be the separate examination of each district type within a state as was done for California, Illinois, and Missouri, in Sections III and IV of this report. For interstate comparisons a simple solution is not at hand so that whatever assumptions are utilized should be clearly spelled out. Given the complexity of the problem, some sensitivity analysis is probably in order.

VII. Conclusions

This report has covered much ground but it is fair to say that many of the questions of equity measurement have not yet been answered. In this section the conclusions that follow most directly from the report itself are discussed first. Throughout this report, a number of additional questions were raised and these are summarized in the second part of this section. Finally, there are a number of issues that are not dealt with in this report and these are briefly discussed in the final part of this section.

A. Findings of this Methodological Assessment

This study has addressed the questions of whether a number of equality and wealth neutrality measures agree, within the respective groups, when used to assess one state over time or to compare a number of states at one point in time. The basic analyses in this study show that for four assessments; equality in a state over time, wealth neutrality in a state over time, equality across states, and wealth neutrality across states, there is far from perfect agreement among the various measures and between units of analysis. But these findings result from a focus on a particular dependent variable, independent variable, pupil measure, two units of analysis, and a specific set of equality and wealth neutrality measures. Furthermore, the level of comparability for the variables limits the conclusions to measurement methodology and not to specific states. First the specific variables and measures that are utilized are reviewed, then the findings are summarized.

For the dependent variable, independent variable and pupil measure, the definitions discussed here are the preferred measures. As explained in Section II, the preferred measures are not always available. The dependent variable examined in this study is a revenue based measure that includes all local plus state revenues except local and state revenues for debt service and capital are excluded. The independent variable for the wealth neutrality measures is assessed value of property equalized at the state-wide level. Average daily membership, rather than attendance, is the preferred pupil definition. Two units of analysis, the district and the unweighted pupil are used throughout the entire assessment. Finally, a set of nine equality measures and nine wealth neutrality measures are used in this study. The equality measures include the following: range, restricted range, Federal range ratio, relative mean deviation, permissible variance, variance, coefficient of variation, standard deviation of logarithms, and Gini coefficient. The wealth neutrality measures examined include a simple correlation measure, three slope measures based on regressions with different functional forms, three elasticity measures based on the three slopes, the Hickrod Gini, and a measure based on predictions from a regression. Finally, it should be reemphasized that the study utilized data from 29 states (see Table I-1) although data incomparabilities reduced the number to around 20 states in each of the four major assessments carried out.

1. Equality Measures Over Time

There is not unaminous agreement when all nine equality measures are used simultaneously, for either unit of analysis, to assess whether a state has become more or less equal over time. For either unit of analysis between 14% and 29% of the intertemporal comparisons show complete agreement for all nine measures. Furthermore, the number of intertemporal comparisons that show complete agreement is reduced below these figures if both units of analysis, rather than one or the other, are utilized.

However, Figure II-1 displayed a number of properties of the nine equality measures where these properties can be viewed as value judgments implicitly taken into account by the measures. The analysis in Section III showed that if the set of nine equality measures is reduced to a specific subset of three or four by accepting certain value judgments and rejecting others, then agreement among this subset of equality measures occurs in close to 90% of the intertemporal comparisons when either unit of analysis is utilized. Agreement among the subset of equality measures is around 70% if the measures are used for both units of analysis simultaneously.

Thus, the basic question whether there is agreement among all the equality measures over time, is answered no with the important caveat that a subset of measures can be formed to produce substantial agreement but this involves accepting certain value judgments. However, there is substantial agreement among the coefficient of variation, standard deviation of logarithms, Gini coefficient, and relative mean deviation when used over time.

2. Wealth Neutrality Measures Over Time

The conclusions for the wealth neutrality measures when used to assess whether a state has become more or less wealth neutral over time roughly parallel those for the equality measures.

If all nine wealth neutrality measures are utilized simultaneously for either unit of analysis, then all wealth neutrality measures agree in roughly 30% of the intertemporal comparisons; complete agreement for both units of analysis used simultaneously for all nine measures is less than 20%. But again, certain value judgments are built into these wealth neutrality measures and these were illustrated in Figure II-2. If specific value judgments are accepted and others rejected, a subset of wealth neutrality measures can be formed. Specifically, if the three elasticity measures are used to assess the wealth neutrality in a state over time, agreement among all three measures using either unit of analysis occurs in between 60% and 70% of the intertemporal comparisons.

The results dictate that certain choices must be made before significant agreement can be obtained among the welath neutraity measures. Hopefully, these choices will be made based on a particular set of value judgments rather than empirical convenience.

3. Equality Measures in Interstate Comparisons

Interstate comparisons are affected by the selection of equality measures and units of analysis. That is, the equality measures and units of analysis do make a difference when a number of states are assessed and compared at one point in time. However, the extent of the agreement depends to a certain degree on the criteria used to define agreement. For example, using the unweighted pupil unit of analysis, the Spearman rank correlations among the rankings yielded by all pairs of the nine equality measures are statistically significant, although they range from .66 to .99. However, for the same pairs of measures, the number of unambiguous rankings is one, the minimum number, in half of the 36 cases. Therefore, the assessment of agreement depends upon the criteria of agreement.

At the same time, regardless of the criteria used to measure agreement, there is relatively more agreement among certain subsets of the nine equality measures. For either unit of analysis, there is relatively more agreement among the coefficient of variation, standard deviation of logarithms, Gini coefficient, relative mean deviation, and Federal range ratio than among any other subset of five equality measures.

Therefore, given the sensitivity of individuals and groups to interstate comparisons, it is probably correct to say that intertemporal comparisons are affected by both the choice of the equality measure and the unit of analysis. Furthermore, there is more agreement among certain measures that embody some common value judgments.

4. Wealth Neutrality Measures In Interstate Comparisons

The conclusions for the wealth neutrality measures used in interstate comparisons are limited to seven specific measures that can be viewed as three groups: the correlation, three slope and three elasticity measures. For these seven wealth neutrality measures the conclusions are rather straightforward. Using either the rank correlation or the unambiguous ranking criteria for agreement there are considerable contradictions among the three groups of measures but substantial agreement among the three slope measures and among the three elasticity measures. Therefore, interstate rankings of wealth neutrality will differ depending upon the type of wealth neutrality measure chosen.

To sum up, in general the answer to all four questions is no, all measures do not agree in any case. However, the selection of a subset of measures will make comparisons over time and across states more discriminating or less ambiguous. The critical question then becomes whether there is sufficient agreement on the value judgments so that specific measures and units of analysis can be selected.

B. Additional Questions Raised During the Methodological Assessment

During the course of this assessment a number of questions were raised that require analyses that go beyond the assessment described above. For a couple of these questions some preliminary sensitivity analyses were performed in Section VI of the report and, for the most part, these analyses indicate that the questions are important.

First, there is the question of the dependent variable. Plausible alternatives to the revenue variable used in this analysis include current operating expenditures, with or without adjustments, local revenues plus state general aid, and total revenues. It is entirely possible that the assessment of equality and wealth neutrality over time or across states can appear very different depending upon the dependent variable utilized. Furthermore, the question of whether the dependent variable should be price adjusted should be considered. Also, the treatment of pensions, social security, and other benefits raises questions related to the choice of the dependent variable. Although data on the above plausible alternatives and specific problems were not analyzed in Section VI, the analysis focused on alternative treatments of capital and debt service and showed certain differences when equality and wealth neutrality are used in a state over time. This analysis points out that the dependent variable question could potentially be critical from an empirical viewpoint.

Second, the weighted pupil unit of analysis appears to be a reasonable unit of analysis under certain conditions. Furthermore, the limited examples presented in Section VI indicate that the weighted and unweighted pupil units of analysis can yield different results when equality and wealth neutrality are assessed over time in a particular state. The questions, then, are whether the weighted pupil unit of analysis should be used and whether the differences observed in the limited sensitivity analysis are generalizable.

Third, a question can be raised about the measurement of equality and wealth neutrality in states that contain one or several large cities. An argument was presented in Section VI that a reasonable procedure is to examine states with and without the large cities so that the effect on the state of the large cities can be more effectively isolated. Other approaches may be preferable but when district level data are available, the existence of large cities raises serious question.

Fourth, there are the questions of which pupil measure to use and whether the choice makes a difference when either intertemporal or interstate comparisons are carried out. The two choices are attendance and membership based measures but data were not available to carry out a sensitivity analysis to compare the effect the alternative pupil measures on the equality and wealth neutrality measures.

Finally, questions regarding the quality of property value assessment procedures including the methodology utilized in state-wide equalization and their effect on wealth neutrality measures have been alluded to but not directly addressed. If assessment procedures are faulty in a systematic fashion, a bias in wealth neutrality measures may result.

C. Issues Not Directly Addressed by this Methodological Assessment

A major constraint of this study, which can be translated into an unaddressed issue, is the limiting definition of equity used throughout. The definitions of equity are limited to two particular classes of measures and furthermore all possible measures within a class are not (and can not) be considered.

The two classes of measures are equality or dispersion measures and ex post measures of "Wealth Neutrality". A third class of measures could be an ex ante measure of wealth neutrality; one that is based on the price paid for educational services and the likely or predicted response to that price rather than on the observed relation between revenues and wealth. Also, there could be a component of equity analysis that focuses on special groups such as educationally and physically handicapped, minorities, or bilingual students to determine whether these groups are treated as desired, an inequality rather than equality assessment.

But even within the two classes of equity measures considered in this report, other measures are possible. For example, equality measures based on utility functions have been introduced in the school finance literature[1] and these can be viewed from either a children equality or household welfare perspective. Also, the relational wealth neutrality measures used in this report do not include alternative specifications of wealth[2] or a constant elasticity specification.

Finally, an issue not considered in this report is whether the levels of agreement among the equality and wealth neutrality measures are determined by other, predictable, factors. Is there more disagreement in larger states, states with more districts, states with a relatively low amount of state aid, states that are relatively equal, etc. Now that the contradictions have been documented, the causes of the contradictions remain to be discovered.

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[1] See R. Inman, "Optimal Fiscal Reform of Metropolitan Schools," American Economic Review 68 (1978). and Berne and Stiefel (1978).

[2] See A. Odden, "Alternative Measures of School District Wealth," Denver ECS (1976).

A METHODOLOGICAL ASSESSMENT OF EDUCATIONAL EQUALITY AND WEALTH NETURALITY MEASURES

by

Robert Berne

APPENDICES A, B, C

A REPORT TO THE SCHOOL
FINANCE COOPERATIVE

July, 1978

Appendix A

The definitions utilized in this report were formulated by the Cooperative members in November, 1977 and the final draft of the memorandum that specifies these definitions is contained in Appendix A. An earlier draft of this memorandum (dated January 12, 1978) was circulated among the Cooperative members and a number of suggested changes were incorporated in this final draft. Complete definitions are set out in Section II of the report.

February 10, 1978

Memorandum

To: Participants in the School Finance Cooperative

From: Bob Berne

Subject: Analysis of the equity of school finance across states.

The purpose of this memo is to set down the various agreements that were reached in Chicago with the subsequent revisions. As I mentioned in my cover memo, if you have any further comments on these, please let me know immediately.

In this memo I will discuss the following items:

I. The definitions for the Data and measures to be used in our first cut at interstate equity and equality measures;

II. A format for data reporting;

III. A proposed procedure for the analysis of the equality and equity measures;

IV. A slightly revised timetable for the calculation of the measures and their subsequent analysis.

I would like to state at the outset that my impression of the magnitude of our initial task is not on the order of "thousands of numbers" for each state-year but instead a somewhat more manageable set of numbers.

I. 'AGREED' UPON MEASURES OF EQUITY AND EQUALITY AND DATA DEFINITIONS

A. The Measure of Pupils

Throughout the discussion below reference will be made to pupils or measures of variables computed on a per-pupil basis. The pupil measures used in the formulation of the independent and dependent variables should be the average daily student membership (ADM) of the district. This pupil measure may be unweighted or weighted depending upon the unit of analysis. (See section G below.) If data are not available in ADM then the most comparable available measure should be employed and the definition carefully explained. In all cases it would be useful if the pupil measure is fully described.

B. Measures of Equality

It was agreed that the following nine measures of equality will be computed for each distribution:

1. Range
2. Restricted Range
3. Federal Range Ratio
4. Relative Mean Deviation
5. Permissible Variance
6. Variance
7. Coefficient of Variation
8. Standard Deviation of Logarithms
9. Gini Coefficient

The formula for each of these measures are discussed in Berne, "Equity and Public Education: Conceptual Issues of Measurement" (hereafter referred to as Berne-Equity paper) and the computational conventions discussed in the paper will be followed in our calculations with one exception.

The formula for the standard deviation of logarithms should read as follows:

$$\left(\sum_{i=1}^{N} P_i \left(Z-\log EXP_i \right)^2 \Big/ \sum_{i=1}^{N} P_i \right)^{1/2}$$

$$\text{where } Z = \frac{\sum_{j=1}^{N} P_j \log EXP_j}{\sum_{j=1}^{N} P_j}$$

and P_i and P_j are the number of pupils in district i and j, EXP_i and EXP_j are the dependent variable per pupil in district i and j, and N is the total number of districts.

When the district is the unit of analysis the formula for the standard deviation of logarithms becomes the following:

$$\left(\sum_{i=1}^{N} (Z-\log EXP_i)^2 \Big/ N \right)^{1/2}$$

$$\text{where } Z = \frac{\sum_{j=1}^{N} \log EXP_j}{N} .$$

Also the definition of the 5th and the 95th percentile is the number below (above) which five percent of the distribution of values falls.

The dependent variable to be used in all the equality measures is discussed in Sections D and G, below.

C. Measures of Equity-Wealth Neutrality

It was agreed that the following six measures of wealth neutrality will be computed for each distribution:

1. Simple correlation (r) between the dependent variable (EXP) and measure of wealth (W). (See Sections E and F, below, for more complete definitions of EXP and W. In all cases these are measured on an unweighted or weighted per pupil basis.)

*2. The slope coefficient (unstandardized) from the estimated regression $EXP = a + b_1W$ where the slope is $\underline{b_1}$.

*3. The slope calculated from the estimated regression $EXP = a + b_1W + b_2W^2$ where the slope is calculated at the mean value of W and equals $b_1 + 2b_2\overline{W}$.

*4. The slope calculated from the estimated regression $EXP = a + b_1W + b_2W^2 + b_3W^3$ where the slope is calculated at the mean value of W and equals $b_1 + 2b_2\overline{W} + 3b_3(\overline{W})^2$.

*5. The difference between two predicted values of EXP where the prediction equation is $EXP = a + b_1W + b_2W^2 + b_3W^3$. The values for W are the mean ($\overline{W}$) plus and minus one standard deviation of W (SDW). The difference between the two predicted values of EXP (ΔEXP) then becomes the following:

$$\Delta \mathrm{EXP} = a + b_1(\overline{W} + SDW) + b_2(\overline{W} + SDW)^2 + b_3(\overline{W} + SDW)^3$$
$$- (a + b_1(\overline{W} - SDW) + b_2(\overline{W} - SDW)^2 + b_3(W - SDW)^3)$$
$$= 2b_1(SDW) + 4b_2(SDW)\overline{W} + b_3(6SDW \cdot \overline{W}^2 + 2SDW^3).$$

6. The bivariate Gini Coefficient (Hickrod Gini) where the variables are EXP and W. (Professor Hickrod has distributed material on this measure to all cooperative members. The material includes a sample program and an explanation.)

   Do not calculate this measure if the Lorenz Curve "crosses" the 45° line.

*Prior to carrying out the calculations for measures #2, 3, 4, and 5 the wealth measure, W, should be divided by 1000 for ease of presentation and computation. For comparability it is important that this division be carried out before the measures are calculated. The division can be made before measures #1 and #6 are calculated since they are unaffected by the division.

D. Measures of Central Tendency

In addition to the equality and equity-wealth neutrality measures the mean value of the dependent variable, EXP, and wealth, W should be computed. Also the standard deviation of W should be computed.

E. Dependent Variable (EXP)

All of the measures described in Sections B, C, and D, above, will be computed for one dependent variable. The agreed upon dependent variable is a revenue based measure that includes all revenues from state and local sources.

Where possible revenues for capital projects and debt service should be excluded, with exceptions noted.

Where possible revenues for food service, adult education, community service, and transportation should be included, with exceptions noted. Federal "impact" aid should be excluded from local and state revenues unless state revenues are reduced by the amount of the impact aid; exceptions to this procedure should be noted. The dependent variable should be computed on a per pupil (ADM) basis in either unweighted or weighted form depending upon the unit of analysis. (See Section G, below.)

F. Measures of Wealth (W)

The agreed upon measure of wealth, W, is the state equalized full value of taxable property in each district. In all cases the measure of wealth will be computed on a weighted or unweighted per pupil (ADM) basis. In situations where state equalized full value of taxable property is unavailable, the most appropriate measure should be substituted and explained.

G. Unit of Analysis

It was agreed that at least two and potentially three units of analysis (depending on data availability) would be used. The two primary units of analysis are the district and the pupil. However, within these two units there are a number of assumptions that must be agreed upon. Note that the use of two or three units of analysis implies that each of the eighteen measures discussed in sections B, C, and D, above, will be computed two or three times for each state year.

1. District as the unit of analysis

   The inputs for the calculations of the measures using the district as the unit of analysis are, for each district, a measure of the dependent variable, EXP, on an unweighted per pupil (ADM) basis and a measure of wealth, W, on an unweighted per pupil (ADM) basis. For this set of calculations each district is treated identically. The number of units in the distribution of EXP equals the number of districts in the state. The dependent variable and measure of wealth are defined in parts E and F, respectively.

2. Pupil as the unit of analysis

   The inputs for the calculations of the measures using the pupil as the unit of analysis, are, for each district, a measure of the dependent variable, EXP, on an unweighted per pupil (ADM) basis, a measure of wealth, W, on an unweighted per pupil (ADM) basis, and a measure of the number of pupils (unweighted ADM's) in the district. For this set of calculations each student is treated identically in the measure. The number of units in the distribution of EXP equals the number of pupils or ADM's in the state. For some of the measures, the calculation can be carried out by weighting each district by the number of pupils (ADM's) in the district but this depends to some degree on the statistical package employed. The measures of the dependent variable, wealth, and the pupil count should be the same as that used in the district level of analysis.

3. Weighted pupil as the unit of analysis

Some states include a pupil weighting in their school district data. Where possible, the measures discussed in Sections B, C, and D, above, should be calculated using a set of student weightings that are in some way utilized by the state. Since these weightings are likely to be state related, the precise definition of the weighting should be discussed in detail. This unit of analysis is then the same as the pupil unit described in #2 above, except now the weighted pupil count (weighted ADM) is used in place of the pupil count (unweighted ADM). The inputs for the calculations of the measures using the weighted pupil as the unit of analysis are, for each district, a measure of the dependent variable, EXP, on a weighted per pupil, WADM, basis, a measure of wealth, W, on a weighted per pupil, WADM, basis, and a measure of weighted pupils, WADM's. For this calculation each student is the unit of analysis but the number of students in each district is now the number of weighted students. Note that if the student weighting that is employed is sensible, then it seems to be appropriate to use weighted students as the denominator of the independent and dependent variables in addition to "weighting" each district by the number of weighted students.

H. Years of Observation

It was agreed that each state would be examined at two points in time whenever possible. It was further agreed that the two years that would be aimed for are 1972-73 and 1975-76. Additional years may be added if available and judged to be appropriate by the analyst.

I. Non-Comparable Districts

If a state is organized into districts that are not comparable in terms of grades included in the sets of districts, each set of comparable districts should be analyzed separately. If more than one set of districts is analyzed due to differences in grade alignments, then the number of districts and ADM's in each set should be reported as well as a description of the various district types.

Also, there may be a comparability problem within one state over time due to redistricting. In all liklihood the data sets have already been adjusted for this so that the procedure utilized should be reported, if appropriate. The number of ADM's and districts involved in the redistricting should also be reported.

II. REPORTING FORMATS

The definitions described above yield eighteen measures for each of two or three units of analysis which equates to 36 or 54 measures for each state-year, assuming a single district type. With two years of data for each of 30 states we will get a total of 2160 or 3240 individual measures.

I am proposing that we organize the measures around the state-year. Each state-year will have associated with it 36 measures (or 54 if weighted pupils are included) that can be represented on a single page, small number of punched cards, or on tape. For states reporting multiple district types the state-year-district type becomes the unit of observation.

Based on the state-year organization and the size of the data set I am requesting that each research group report their data in printed form and either on cards or tape. My own preference based on my expected analysis procedures is for cards but I realize that this is not possible for all groups. Therefore, I will propose a format for the printed, punched cards, and tape forms.

A. Printed Format

Since we will be sharing the data among ourselves and perhaps with others it would be efficient for us to report the data in a common printed format. A one page table can be constructed that displays each of the eighteen measures for the three units of analysis for each of the state-years. A sample is displayed on the following page and labelled Table 1. Thus, the total enterprise will yield 62 or more tables of this kind.

Note that the mean value of W and the standard deviation of W (always defined on a per pupil basis) should be displayed in Table 1. Also, the wealth measure should be divided by 1,000 before reporting on the table. Finally, please report, for each table, the number of districts and pupils represented on the table in the space on top of the table. The method used to calculate the number of pupils should also be reported at the top of the table (in parentheses).

Table 1

State ____________

Year ____________

District Type ________

Number of Districts ________

Number of Pupils ( )________

Number of Weighted Pupils ( )___

		Unit of Analysis	
Measures of Mean, Equality, and Fiscal Neutrality	District	Unweighted Pupil	Weighted Pupil
1. Mean EXP			
2. Range			
3. Restricted Range			
4. Federal Range Ratio			
5. Relative Mean Deviation			
6. Permissible Variance			
7. Variance			
8. Coefficient of Variation			
9. Standard Deviations of Logarithms			
10. Gini Coefficient			
11. Simple Correlation--Wealth (W)			
12. Slope--W			
13. Slope, W, W^2 (at $\bar{W}$)			
14. Slope W, W^2, W^3 (at $\bar{W}$)			
15. Change in Expenditures $W \pm SD(W)$ at $\bar{W}$ (W, W^2, W^3)			
16. Hickrod Gini Coefficient			
17. Mean W($ thousands)			
18. Standard Deviation W ($ thousands)			

B. Punched Card Format

The fifty four measures displayed in the table, if punched six to a card, can be recorded on nine cards for each state-year. Each card will have certain identification information and six measures punched in fields of twelve (E12.5) but in each case the decimal point should be punched. Each measure should contain five significant digits and the numbers should be right justified in the fields. Each card will be organized as follows:

Format	Punches on Card	Description of Data
I2	1-2	State #; see attached list, table 3.
I2	3-4	Year; first year of data, 75-76 = 75.
I2	5-6	District type; 01 if all districts equal, otherwise use 02 and up to 99
I2	7-8	Card number; 01-09.
E12.5	9-20	Measure position 1.
E12.5	21-32	Measure position 2.
E12.5	33-44	Measure position 3.
E12.5	45-56	Measure position 4.
E12.5	57-68	Measure position 5.
E12.5	69-80	Measure position 6.

If we designate the nine cards C1, C2, . . . C9 and the six positions as P1, P2, . . . P6, then each measure can be placed in a position on a card as shown in Table 2.

C. Tape Format

The tape format should be consistent with the card format. The data for each state year will be displayed in ten 80 character fields with the same format and data as the punched cards. The format for each state year will be 9(4I2,6E12.5). (Again, decimal points should be punched and numbers right justified.) The

State ______________ Table 2

Year ______________

District Type __________

Number of Districts ______________

Number of Pupils ( ) ______________

Number of Weighted Pupils ( ) ______

Measures of Mean, Equality, and Fiscal Neutrality	Unit of Analysis District	Unweighted Pupil	Weighted Pupil
1. Mean EXP	C1, P1	C1, P2	C1, P3
2. Range	C1, P4	C1, P5	C1, P6
3. Restricted Range	C2, P1	C2, P2	C2, P3
4. Federal Range Ratio	C2, P4	C2, P5	C2, P6
5. Relative Mean Deviation	C3, P1	C3, P2	C3, P3
6. Permissible Variance	C3, P4	C3, P5	C3, P6
7. Variance	C4, P1	C4, P2	C4, P3
8. Coefficient of Variation	C4, P4	C4, P5	C4, P6
9. Standard Deviations of Logarithms	C5, P1	C5, P2	C5, P3
10. Gini Coefficient	C5, P4	C5, P5	C5, P6
11. Simple Correlation--Wealth (W)	C6, P1	C6, P2	C6, P3
12. Slope--W	C6, P4	C6, P5	C6, P6
13. Slope, W, W^2 (at $\overline{W}$)	C7, P1	C7, P2	C7, P3
14. Slope W, W^2, W^3 (at $\overline{W}$)	C7, P4	C7, P5	C7, P6
15. Change in Expenditures $W \pm SD(W)$ at $\overline{W}$ (W, W^2, W^3)	C8, P1	C8, P2	C8, P3
16. Hickrod Gini Coefficient	C8, P4	C8, P5	C8, P6
17. Mean W($ thousands)	C9, P1	C9, P2	C9, P3
18. Standard Deviation W ($ thousands)	C9, P4	C9, P5	C9, P6

following tape specs were suggested by the NYU computer consultants and should be used, if possible:

1600 b. p. i.
Standard Label Tapes
LRECL = 80
BLSIZE = 3200
RECFM = FB
EBCDIC character representation

Also, if tapes are used, please include a printout of the tape, the specs of the tape, and if possible, the JCL used to generate the tape.

III. SUGGESTIONS FOR ANALYSIS

The primary aim of the analysis should be an evaluation of the consistency of the rankings yielded by the different measures and different units of analysis both across states and over time.

The consistency of the measures can be assessed in at least three ways. First, for two or more selected measures, the rankings can be combined to present a set of unambiguous rankings. (This procedure was used in the Berne-Equity paper using Missouri data.) If all the measures agree, the number of rankings will equal the number of states; otherwise there will be conflicts among the measures and the number of unambiguous rankings will be reduced. Second, for any set of selected measures a state "profile" can be constructed that shows the ranking for that state on the selected measures. For certain states the profile may only include a small variation in the ranks while for others there may be considerable variation. In this analysis the state rather than the measure is the primary focus of the analysis. The third approach consists of using rank correlations to measure the consistency among the measures. This provides an alternative to the first methodology and does present a numerical, rather than a visual comparison among the measures.

These three techniques can be used for at least six comparisons among the measures including the following:

1. For all states at one point in time for each unit of analysis, how consistent are the rankings yielded by the equality measures?

   Are there states whose ranking is unaffected by the selection of various equality measures?

   For the equality measures, how consistent are the rankings that result from different units of analysis?

   Are there states whose ranking is unaffected by the selection of a unit of analysis?

   What are the characteristics of the state that cause a change over the measures or unit of analysis?

2. The questions asked in #1, above, can be repeated for the fiscal neutrality measures.

3. The questions asked in #1, above, can be repeated for the fiscal neutrality and equality measures in order to determine the consistency between the two classes of equity measures.

4. The questions asked in #1, above, can be asked for the equality measures for each state at two points in time.

5. The questions asked in #1, above, can be asked for the fiscal neutrality measures for each state at two points in time.

6. The questions asked in #1, above, can be asked for the fiscal neutrality and equality measures combined for each state at two points in time.

(The first three questions can also be asked using all observations--two from each state.)

This analysis will hopefully allow us to know more about the consistency among the measures as well as the equality among states. It will allow us to make some conclusions and suggestions for future analysis.

IV. PROPOSED TIMETABLE

A. Receipt of this memo by cooperative members -- 1/18/78.

B. Agreement on definitions and data formats suggested in this memo -- 2/13/78.

C. Calculation of measures and reporting to Berne in printed and, punched or tape format -- 3/17/78.

D. Analysis of consistency among measures and preparation of preliminary report to cooperative members -- 4/21/78.

TABLE 3

STATE #	STATE	ANALYSIS GROUP
	New England	
01	Connecticut	ETS/EPRI
02	Maine	NCSL
03	Massachusetts	L.C.
04	New Hampshire	ETS/EPRI
05	Rhode Island	--
06	Vermont	ETS/EPRI
	Mideast	
07	Delaware	--
08	Maryland	L.C./NCSL
09	New Jersey	ETS/EPRI
10	New York	ETS/EPRI
11	Pennsylvania	--
	Great Lakes	
12	Illinois	Ill.
13	Indiana	--
14	Michigan	Rand
15	Ohio	Ill. (tentative)
16	Wisconsin	--
	Plains	
17	Iowa	Ill. (tentative)
18	Kansas	NCSL
19	Minnesota	ECS
20	Missouri	ECS
21	Nebraska	--
22	North Dakota	NCSL
23	South Dakota	ECS
	Southeast	
24	Alabama	L.C.
25	Arkansas	--
26	Florida	IDRA-GARMS
27	Georgia	L.C.
28	Kentucky	ECS
29	Louisana	L.C.
30	Mississippi	L.C.
31	North Carolina	--
32	South Carolina	L.C.
33	Tennessee	--
34	Virginia	--
35	West Virginia	L.C.
	Southwest	
36	Arizona	--
37	New Mexico	IDRA-GARMS
38	Oklahoma	--
39	Texas	IDRA-GARMS

TABLE 3 (continued)

STATE #	STATE	ANALYSIS GROUP
	Rocky Mountain	
40	Colorado	ECS
41	Idaho	--
42	Montana	--
43	Utah	NCSL
44	Wyoming	--
	Far West	
45	California	RAND
46	Nevada	--
47	Oregon	ECS
48	Washington	ECS
49	Alaska	--
50	Hawaii	--

Appendix B

Appendix B lists the data contributed by the Cooperative members, organized by state-year. The pupil, revenue, and wealth definitions utilized in each state are also sepcified in this Appendix.

Table I-1, in the report, identifies the contributor for each state. Descriptions of the equality and wealth neutrality measures can be found in Section II of the report.

For most states, the equality and wealth neutrality measures are computed for all districts in a state. However, several states are organized according to different district types and the equality and wealth neutrality measures are computed for these separate district types in certain cases. When the measures are computed for all districts a "1" appears on the table under "DISTRICT TYPE"; otherwise the particular sub-set of districts represented in the table is spelled out under this heading.

The mean and standard deviation of wealth reported in the table are in thousands of dollars. Also, the slopes are calculated from regressions where the revenues are in dollars and the wealth is in thousands of dollars.

When a particular measure is not reported it is displayed as "0.00000" in the tables.

TABLE B-1

```
STATE -- ALA                            NUMBER OF DISTRICTS -- 126

YEAR -- 1972                            NUMBER OF PUPILS -- 808401

DISTRICT TYPE -- 1                      NUMBER OF WEIGHTED PUPILS --

                                 U N I T   O F   A N A L Y S I S
                                 -------------------------------
       MEASURES OF MEAN,
       EQUALITY, AND             DISTRICT         UNWEIGHTED          WEIGHTED
       FISCAL NEUTRALITY                             PUPIL              PUPIL
----------------------------------------------------------------------------------

   1.  MEAN EXP                 453.00000         458.00000           0.00000
   2.  RANGE                    746.00000         746.00000           0.00000
   3.  RES RANGE                189.00000         168.00000           0.00000
   4.  FED R R                     .52079            .45854           0.00000
   5.  REL MN DEV                  .12216            .10156           0.00000
   6.  PERM VAR                    .90258            .95382           0.00000
   7.  VAR                     7307.00000        4522.00000           0.00000
   8.  COEF VAR                    .18885            .14670           0.00000
   9.  STD DEV LOG                 .15793            .12985           0.00000
  10.  GINI                        .08632            .07131           0.00000
  11.  SIM CORR                   0.00000           0.00000           0.00000
  12.  SLOPE W                    0.00000           0.00000           0.00000
  13.  SLOPE W2                   0.00000           0.00000           0.00000
  14.  SLOPE W3                   0.00000           0.00000           0.00000
  15.  EXP DIF                    0.00000           0.00000           0.00000
  16.  HICK GINI                  0.00000           0.00000           0.00000
  17.  MEAN W                     0.00000           0.00000           0.00000
  18.  STD DEV W                  0.00000           0.00000           0.00000
  19.  ELAST W                    0.00000           0.00000           0.00000
  20.  ELAST W2                   0.00000           0.00000           0.00000
  21.  ELAST W3                   0.00000           0.00000           0.00000
```

Variable descriptions:

1. Pupil (unweighted): Enrollment

2. Revenues: Total District, County, and State Revenues plus other Revenues. (These revenues include revenues for capital purposes, since these could not be subtracted out.)

3. Wealth: Not available at district level.

4. Districts: All

TABLE B-2

STATE -- ALA NUMBER OF DISTRICTS -- 127

YEAR -- 1975 NUMBER OF PUPILS -- 783218

DISTRICT TYPE -- 1 NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	704.00000	710.00000	0.00000
2. RANGE	785.00000	783.00000	0.00000
3. RES RANGE	328.00000	229.00000	0.00000
4. FED R R	.57241	.38119	0.00000
5. REL MN DEV	.11373	.09493	0.00000
6. PERM VAR	.89356	.93152	0.00000
7. VAR	11230.00000	7343.00000	0.00000
8. COEF VAR	.15715	.12071	0.00000
9. STD DEV LOG	.14458	.11620	0.00000
10. GINI	.08085	.06569	0.00000
11. SIM CORR	0.00000	0.00000	0.00000
12. SLOPE W	0.00000	0.00000	0.00000
13. SLOPE W2	0.00000	0.00000	0.00000
14. SLOPE W3	0.00000	0.00000	0.00000
15. EXP DIF	0.00000	0.00000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	0.00000	0.00000	0.00000
18. STD DEV W	0.00000	0.00000	0.00000
19. ELAST W	0.00000	0.00000	0.00000
20. ELAST W2	0.00000	0.00000	0.00000
21. ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

See Table B-1 (Alabama 1972).

TABLE B-3

STATE -- CAL
YEAR -- 1970
DISTRICT TYPE --UNIFIED

NUMBER OF DISTRICTS -- 240
NUMBER OF PUPILS -- 3084455
NUMBER OF WEIGHTED PUPILS --

		UNIT OF ANALYSIS		
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	914.55000	859.51000	0.00000
2.	RANGE	2080.60000	2080.60000	0.00000
3.	RES RANGE	655.23000	498.70000	0.00000
4.	FED R R	.94936	.71285	0.00000
5.	REL MN DEV	.17704	.12286	0.00000
6.	PERM VAR	.90299	.92245	0.00000
7.	VAR	58382.00000	27886.00000	0.00000
8.	COEF VAR	.26420	.19254	0.00000
9.	STD DEV LGS	.21712	.16306	0.00000
10.	GINI	.12312	.08600	0.00000
11.	SIM CORR	.82971	.80109	0.00000
12.	SLOPE W	4.31300	5.42690	0.00000
13.	SLOPE W2	4.07000	5.41790	0.00000
14.	SLOPE W3	4.48520	5.23490	0.00000
15.	EXP DIF	427.73000	354.81000	0.00000
16.	HICK GINI	.10533	.07139	0.00000
17.	MEAN W	64.72200	49.02200	0.00000
18.	STD DEV W	46.48200	24.42800	0.00000
19.	ELAST W	.30523	.30952	0.00000
20.	ELAST W2	.28803	.30901	0.00000
21.	ELAST W3	.31741	.29857	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA)
2. Revenues: State and local revenues excluding revenues for debt service and capital.
3. Wealth: State equalized assessed value.
4. Districts: All unified districts.

TABLE B-4

STATE -- CAL	NUMBER OF DISTRICTS -- 242
YEAR -- 1971	NUMBER OF PUPILS -- 3066881
DISTRICT TYPE --UNIFIED	NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	970.45000	924.61000	0.00000
2. RANGE	2217.80000	2217.80000	0.00000
3. RES RANGE	782.46000	870.51000	0.00000
4. FED R R	1.07980	.77992	0.00000
5. REL MN DEV	.19027	.12244	0.00000
6. PERM VAR	.88898	.89683	0.00000
7. VAR	70723.00000	32559.00000	0.00000
8. COFF VAR	.27404	.19515	0.00000
9. STD DEV LGS	.23022	.17005	0.00000
10. GINI	.13152	.09198	0.00000
11. SIM CORR	.83627	.83193	0.00000
12. SLOPE W	4.51400	5.88030	0.00000
13. SLOPE W2	4.60210	6.20650	0.00000
14. SLOPE W3	4.77620	6.21600	0.00000
15. EXP DIF	476.97000	317.42000	0.00000
16. HICK GINI	.11223	.07923	0.00000
17. MEAN W	69.53600	51.48800	0.00000
18. STD DEV W	49.26800	25.52800	0.00000
19. ELAST W	.32344	.32745	0.00000
20. ELAST W2	.32976	.34562	0.00000
21. ELAST W3	.34223	.34615	0.00000

Variable descriptions:

See Table B-3 (California-Unified, 1970).

TABLE B-5

```
STATE -- CAL                          NUMBER OF DISTRICTS -- 244

YEAR -- 1972                          NUMBER OF PUPILS -- 3034628

DISTRICT TYPE -- UNIFIED              NUMBER OF WEIGHTED PUPILS --

                                          U N I T   O F   A N A L Y S I S
                                          -------------------------------
   MEASURES OF MEAN,
   EQUALITY, AND               DISTRICT           UNWEIGHTED        WEIGHTED
   FISCAL NEUTRALITY                                 PUPIL            PUPIL
-------------------------------------------------------------------------------

 1.  MEAN EXP                1064.30000        1038.00000          0.00000
 2.  RANGE                   2237.60000        2237.60000          0.00000
 3.  RES RANGE                791.76000         612.86000          0.00000
 4.  FED R R                    1.00170           .76037           0.00000
 5.  REL MN DEV                  .19423           .14214           0.00000
 6.  PERM VAR                    .89343           .88758           0.00000
 7.  VAR                    86546.00000       37507.00000          0.00000
 8.  COEF VAR                    .27641           .18658           0.00000
 9.  STD DEV LGS                 .23041           .17256           0.00000
10.  GINI                        .13254           .09719           0.00000
11.  SIM CORR                    .80918           .80616           0.00000
12.  SLOPE W                    4.46300          5.75680           0.00000
13.  SLOPE W2                   4.76690          6.49040           0.00000
14.  SLOPE W3                   4.79180          6.87610           0.00000
15.  EXP DIF                  512.23000         575.22000          0.00000
16.  HICK GINI                   .11137           .08226           0.00000
17.  MEAN W                    75.06600          55.56000          0.00000
18.  STD DEV W                 53.33900          27.12100          0.00000
19.  ELAST W                     .31478           .30814           0.00000
20.  ELAST W2                    .33621           .34741           0.00000
21.  ELAST W3                    .33797           .36805           0.00000
```

Variable descriptions:

See Table B-3   (California-Unified, 1970).

TABLE B-6

STATE -- CAL
YEAR -- 1973
DISTRICT TYPE -- UNIFIED

NUMBER OF DISTRICTS -- 251
NUMBER OF PUPILS -- 3058193
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1225.10000	1152.80000	0.00000
2.	RANGE	2472.90000	2472.90000	0.00000
3.	RES RANGE	907.26000	833.91000	0.00000
4.	FED R R	.95386	.55546	0.00000
5.	REL MN DEV	.16962	.10327	0.00000
6.	PERM VAR	.91015	.94359	0.00000
7.	VAR	90307.00000	35971.00000	0.00000
8.	COEF VAR	.24529	.16452	0.00000
9.	STD DEV LGS	.20506	.14276	0.00000
10.	GINI	.11631	.07508	0.00000
11.	SIM CORR	.81204	.77746	0.00000
12.	SLOPE W	4.02400	5.04970	0.00000
13.	SLOPE W2	4.00670	5.24220	0.00000
14.	SLOPE W3	4.22930	5.15450	0.00000
15.	EXP DIF	524.13000	400.61000	0.00000
16.	HICK GINI	.09493	.05940	0.00000
17.	MEAN W	82.45400	59.63800	0.00000
18.	STD DEV W	60.64300	29.20000	0.00000
19.	ELAST W	.27083	.26124	0.00000
20.	ELAST W2	.26967	.27120	0.00000
21.	ELAST W3	.28465	.26666	0.00000

Valuable descriptions:

See Table B-3 (California-Unified, 1970).

TABLE B-7

STATE -- CAL
YEAR -- 1974
DISTRICT TYPE -- UNIFIED

NUMBER OF DISTRICTS -- 248
NUMBER OF PUPILS -- 3095609
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1300.90000	1245.60000	0.00000
2. RANGE	1933.50000	1933.50000	0.00000
3. RES RANGE	872.95000	486.38000	0.00000
4. FED R R	.82225	.45246	0.00000
5. REL MN DEV	.15204	.09695	0.00000
6. PERM VAR	.92400	.92343	0.00000
7. VAR	78426.00000	34755.00000	0.00000
8. COFF VAR	.21528	.14966	0.00000
9. STD DEV LGS	.18450	.13231	0.00000
10. GINI	.10327	.07069	0.00000
11. SIM CORR	.79194	.76455	0.00000
12. SLOPE W	3.63480	4.54860	0.00000
13. SLOPE W2	3.65720	4.96570	0.00000
14. SLOPE W3	3.58860	4.86050	0.00000
15. EXP DIF	433.74000	803.76000	0.00000
16. HICK GINI	.08344	.05550	0.00000
17. MEAN W	88.33100	64.22700	0.00000
18. STD DEV W	61.01600	31.37600	0.00000
19. ELAST W	.24680	.23454	0.00000
20. ELAST W2	.24832	.25605	0.00000
21. ELAST W3	.24367	.25062	0.00000

Variable descriptions:

See Table B-3 (California-Unified, 1970).

TABLE B-8

STATE -- CAL
YEAR -- 1970
DISTRICT TYPE -- HIGH SCHOOL

NUMBER OF DISTRICTS -- 118
NUMBER OF PUPILS -- 525,444
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1111.90000	1027.70000	0.00000
2. RANGE	1272.70000	1272.70000	0.00000
3. RES RANGE	978.98000	711.27000	0.00000
4. FED P R	1.17290	.96609	0.00000
5. REL MN DEV	.16900	.12509	0.00000
6. PERM VAR	.91127	.91171	0.00000
7. VAR	69284.00000	32504.00000	0.00000
8. COEF VAR	.23672	.17570	0.00000
9. STD DEV LGS	.20905	.16630	0.00000
10. GINI	.11806	.09127	0.00000
11. SIM CORR	.86281	.82881	0.00000
12. SLOPE W	1.89330	2.46840	0.00000
13. SLOPE W2	2.58830	2.97100	0.00000
14. SLOPE W3	2.52210	2.96970	0.00000
15. EXP DIF	594.69000	860.04000	0.00000
16. HICK GINI	.10342	.07826	0.00000
17. MEAN W	182.04000	133.07000	0.00000
18. STD DEV W	119.96000	60.62900	0.00000
19. ELAST W	.30997	.31962	0.00000
20. ELAST W2	.42376	.38469	0.00000
21. ELAST W3	.41292	.38453	0.00000

Variable descriptions:

1. Pupil (unweighted); Average Daily Attendance (ADA).
2. Revenues: State and local revenues excluding revenues for debt service and capital.
3. Wealth: State equalized assessed value.
4. Districts: All high school districts.

TABLE B-9

STATE -- CAL

YEAR -- 1971

DISTRICT TYPE -- HIGH SCHOOL

NUMBER OF DISTRICTS -- 117

NUMBER OF PUPILS -- 533,965

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1176.00000	1080.20000	0.00000
2.	RANGE	1599.70000	1599.70000	0.00000
3.	RES RANGE	994.56000	760.99000	0.00000
4.	FED R R	1.12420	1.01720	0.00000
5.	REL MN DEV	.17428	.12918	0.00000
6.	PERM VAR	.88695	.89987	0.00000
7.	VAR	84689.00000	38376.00000	0.00000
8.	COEF VAR	.24746	.18136	0.00000
9.	STD DEV LGS	.21851	.17384	0.00000
10.	GINI	.12352	.09470	0.00000
11.	SIM CORR	.84979	.83213	0.00000
12.	SLOPE W	1.97830	2.58880	0.00000
13.	SLOPE W2	2.55240	3.10980	0.00000
14.	SLOPE W3	2.51130	3.12610	0.00000
15.	EXP DIF	616.66000	594.37000	0.00000
16.	HICK GINI	.10455	.08130	0.00000
17.	MEAN W	195.12000	139.64000	0.00000
18.	STD DEV W	125.01000	62.96800	0.00000
19.	ELAST W	.32824	.33466	0.00000
20.	ELAST W2	.42349	.40201	0.00000
21.	ELAST W3	.41667	.40412	0.00000

Variable descriptions:

See Table B-8 (California-High School, 1970).

TABLE B-10

STATE -- CAL
YEAR -- 1972
DISTRICT TYPE -- HIGH SCHOOL

NUMBER OF DISTRICTS -- 117
NUMBER OF PUPILS -- 542,612
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1294.40000	1182.00000	0.00000
2.	RANGE	1565.00000	1565.00000	0.00000
3.	RES RANGE	897.70000	844.17000	0.00000
4.	FED R R	.91497	1.03410	0.00000
5.	REL MN DEV	.16796	.12543	0.00000
6.	PERM VAR	.87313	.87686	0.00000
7.	VAR	83113.00000	44427.00000	0.00000
8.	COEF VAR	.22272	.17833	0.00000
9.	STD DEV LGS	.20562	.17303	0.00000
10.	GINI	.11748	.09401	0.00000
11.	SIM CORR	.81675	.82732	0.00000
12.	SLOPE W	1.92970	2.63750	0.00000
13.	SLOPE W2	2.58890	3.12920	0.00000
14.	SLOPE W3	2.57950	3.13940	0.00000
15.	EXP DIF	623.64000	415.70000	0.00000
16.	HICK GINI	.09827	.07868	0.00000
17.	MEAN W	205.84000	148.65000	0.00000
18.	STD DEV W	122.02000	66.11700	0.00000
19.	ELAST W	.30687	.33170	0.00000
20.	ELAST W2	.41170	.39353	0.00000
21.	ELAST W3	.41020	.39482	0.00000

Variable descriptions:

See Table B-8 (California-High School, 1970).

TABLE B-11

STATE -- CAL

YEAR -- 1973

DISTRICT TYPE -- HIGH SCHOOL

NUMBER OF DISTRICTS -- 114

NUMBER OF PUPILS -- 544403

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1421.90000	1267.20000	0.00000
2.	RANGE	1727.10000	1727.10000	0.00000
3.	RES RANGE	1174.30000	792.77000	0.00000
4.	FED R R	1.17220	.84293	0.00000
5.	REL MN DEV	.16728	.13714	0.00000
6.	PERM VAR	.89373	.86189	0.00000
7.	VAR	101460.00000	54701.00000	0.00000
8.	COEF VAR	.22401	.18457	0.00000
9.	STD DEV LGS	.20697	.18065	0.00000
10.	GINI	.11765	.09976	0.00000
11.	SIM CORR	.81769	.81013	0.00000
12.	SLOPE W	2.26730	2.71610	0.00000
13.	SLOPE W2	2.70430	3.08970	0.00000
14.	SLOPE W3	2.72570	3.11050	0.00000
15.	EXP DIF	615.31000	435.69000	0.00000
16.	HICK GINI	.09661	.07663	0.00000
17.	MEAN W	215.12000	156.04000	0.00000
18.	STD DEV W	114.87000	69.76200	0.00000
19.	ELAST W	.34302	.33445	0.00000
20.	ELAST W2	.40913	.38046	0.00000
21.	ELAST W3	.41237	.38302	0.00000

Variable descriptions:

See Table B-8 (California-High School, 1970).

TABLE B-12

STATE -- CAL	NUMBER OF DISTRICTS -- 114

YEAR -- 1974	NUMBER OF PUPILS -- 559,589

DISTRICT TYPE -- HIGH SCHOOL	NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1461.80000	1317.30000	0.00000
2.	RANGE	1779.10000	1779.10000	0.00000
3.	RES RANGE	1002.30000	768.05000	0.00000
4.	FED R R	.94491	.80166	0.00000
5.	REL MN DEV	.15135	.12380	0.00000
6.	PERM VAR	.88790	.86765	0.00000
7.	VAR	96130.00000	45246.00000	0.00000
8.	COEF VAR	.21211	.16147	0.00000
9.	STD DEV LGS	.19486	.15864	0.00000
10.	GINI	.10960	.08826	0.00000
11.	SIM CORR	.70654	.74167	0.00000
12.	SLOPE W	1.60740	1.92640	0.00000
13.	SLOPE W2	2.37290	2.49140	0.00000
14.	SLOPE W3	2.29490	2.52630	0.00000
15.	EXP DIF	616.29000	414.73000	0.00000
16.	HICK GINI	.08663	.06787	0.00000
17.	MEAN W	235.56000	169.55000	0.00000
18.	STD DEV W	136.29000	81.89400	0.00000
19.	ELAST W	.25902	.24795	0.00000
20.	ELAST W2	.38238	.32067	0.00000
21.	ELAST W3	.36981	.32516	0.00000

Variable descriptions:

See Table B-8 (California-High School, 1970).

TABLE B-13

STATE -- CAL

YEAR -- 1970

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 711

NUMBER OF PUPILS -- 1082396

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	885.99000	778.12000	0.00000
2.	RANGE	3983.90000	3983.90000	0.00000
3.	RES RANGE	1098.90000	475.70000	0.00000
4.	FED R R	1.99710	.79470	0.00000
5.	REL MN DEV	.30464	.14990	0.00000
6.	PERM VAR	.86087	.91537	0.00000
7.	VAR	165520.00000	28251.00000	0.00000
8.	COEF VAR	.45920	.21601	0.00000
9.	STD DEV LGS	.34759	.18775	0.00000
10.	GINI	.20704	.10539	0.00000
11.	SIM CORR	.77388	.67202	0.00000
12.	SLOPE W	1.11490	1.79370	0.00000
13.	SLOPE W2	1.58300	2.34980	0.00000
14.	SLOPE W3	1.97150	2.84600	0.00000
15.	EXP DIF	1120.70000	858.61000	0.00000
16.	HICK GINI	.17118	.07764	0.00000
17.	MEAN W	168.32000	64.62100	0.00000
18.	STD DEV W	282.39000	62.97400	0.00000
19.	ELAST W	.21181	.14896	0.00000
20.	ELAST W2	.30074	.19515	0.00000
21.	ELAST W3	.37454	.23635	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA)
2. Revenues: State and local revenues excluding revenues for debt service and capital.
3. Wealth: State equalized assessed value.
4. Districts: All elementary districts.

TABLE B-14

STATE -- CAL

YEAR -- 1971

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 707

NUMBER OF PUPILS -- 1062811

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	924.13000	917.64000	0.00000
2. RANGE	4733.40000	4733.40000	0.00000
3. RES RANGE	1249.10000	944.03000	0.00000
4. FED R R	9.21760	.88030	0.00000
5. REL MN DEV	.30887	.15750	0.00000
6. PERM VAR	.84885	.89820	0.00000
7. VAR	175030.00000	33942.00000	0.00000
8. COEF VAR	.45271	.22532	0.00000
9. STD DEV LGS	.35292	.19804	0.00000
10. GINI	.21010	.11181	0.00000
11. SIM CORR	.79033	.68868	0.00000
12. SLOPE W	1.20010	1.98620	0.00000
13. SLOPE W2	1.44850	2.47750	0.00000
14. SLOPE W3	1.97180	3.04920	0.00000
15. EXP DIF	1099.00000	989.86000	0.00000
16. HICK GINI	.16970	.08372	0.00000
17. MEAN W	180.20000	70.19300	0.00000
18. STD DEV W	275.51000	63.88100	0.00000
19. ELAST W	.23401	.17051	0.00000
20. ELAST W2	.28245	.21269	0.00000
21. ELAST W3	.38449	.26177	0.00000

Variable descriptions:

See Table B-13 (California-Elementary, 1970).

TABLE B-15

STATE -- CAL

YEAR -- 1972

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 705

NUMBER OF PUPILS -- 1051895

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1037.00000	907.37000	0.00000
2. RANGE	5977.50000	5977.50000	0.00000
3. RES RANGE	1345.00000	855.39000	0.00000
4. FED R R	2.16270	.79822	0.00000
5. REL MN DEV	.31612	.14989	0.00000
6. PERM VAR	.84639	.90980	0.00000
7. VAR	278020.00000	38294.00000	0.00000
8. COEF VAR	.50848	.21566	0.00000
9. STD DEV LGS	.36123	.18928	0.00000
10. GINI	.21662	.10594	0.00000
11. SIM CORR	.79315	.67898	0.00000
12. SLOPE W	1.39700	1.98310	0.00000
13. SLOPE W2	1.68110	2.45850	0.00000
14. SLOPE W3	1.89750	2.89110	0.00000
15. EXP DIF	1144.40000	987.74000	0.00000
16. HICK GINI	.17627	.07367	0.00000
17. MEAN W	199.77000	76.71800	0.00000
18. STD DEV W	299.36000	67.00200	0.00000
19. ELAST W	.26912	.16767	0.00000
20. ELAST W2	.32385	.20787	0.00000
21. ELAST W3	.36554	.24444	0.00000

__Variable descriptions:__

See Table B-13 (California-Elementary, 1970).

TABLE B-16

STATE -- CAL
YEAR -- 1973
DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 687
NUMBER OF PUPILS -- 1010025
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1238.80000	1072.30000	0.00000
2. RANGE	14418.00000	14418.00000	0.00000
3. RES RANGE	1526.10000	979.23000	0.00000
4. FED R R	1.97760	.67977	0.00000
5. REL MN DEV	.30553	.13698	0.00000
6. PERM VAR	.86537	.92756	0.00000
7. VAR	561020.00000	45028.00000	0.00000
8. COEF VAR	.60461	.19789	0.00000
9. STD DEV LGS	.34892	.17117	0.00000
10. GINI	.21053	.09564	0.00000
11. SIM CORR	.74615	.66260	0.00000
12. SLOPE W	1.52070	1.92580	0.00000
13. SLOPE W2	.92805	2.39800	0.00000
14. SLOPE W3	2.21680	2.78560	0.00000
15. EXP DIF	1676.90000	907.09000	0.00000
16. HICK GINI	.16441	.06391	0.00000
17. MEAN W	225.23000	84.13300	0.00000
18. STD DEV W	367.52000	73.01000	0.00000
19. ELAST W	.27648	.15110	0.00000
20. ELAST W2	.16873	.18815	0.00000
21. ELAST W3	.40304	.21856	0.00000

Variable descriptions:

See Table B-13 (California-Elementary, 1970).

TABLE B-17

STATE -- CAL

YEAR -- 1974

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 678

NUMBER OF PUPILS -- 981355

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNIT OF ANALYSIS UNWEIGHTED PUPIL	UNIT OF ANALYSIS WEIGHTED PUPIL
1. MEAN EXP	1366.30000	1168.90000	0.00000
2. RANGE	9695.80000	9695.80000	0.00000
3. RES RANGE	1514.10000	875.72000	0.00000
4. FED R R	1.69400	.59765	0.00000
5. REL MN DEV	.28856	.13094	0.00000
6. PERM VAR	.87103	.93237	0.00000
7. VAR	538380.00000	47356.00000	0.00000
8. COEF VAR	.53704	.18617	0.00000
9. STD DEV LGS	.33426	.16032	0.00000
10. GINI	.19943	.08969	0.00000
11. SIM CORR	.58611	.61743	0.00000
12. SLOPE W	1.01210	1.37470	0.00000
13. SLOPE W2	1.51240	1.98050	0.00000
14. SLOPE W3	1.80750	2.36270	0.00000
15. EXP DIF	1546.10000	462.14000	0.00000
16. HICK GINI	.15282	.06229	0.00000
17. MEAN W	253.76000	96.66100	0.00000
18. STD DEV W	424.92000	97.73800	0.00000
19. ELAST W	.18798	.11368	0.00000
20. ELAST W2	.28089	.16378	0.00000
21. ELAST W3	.33570	.19538	0.00000

Variable descriptions:

See Table B-13 (California-Elementary, 1970).

TABLE B-18

STATE -- COL

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 174

NUMBER OF PUPILS -- 524244

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1184.40000	1010.00000	0.00000
2. RANGE	2606.00000	2606.00000	0.00000
3. RES RANGE	1326.00000	510.00000	0.00000
4. FED R R	1.89700	.70637	0.00000
5. REL MN DEV	.27130	.14037	0.00000
6. PERM VAR	.87127	.83140	0.00000
7. VAR	201150.00000	35653.00000	0.00000
8. COEF VAR	.37867	.18694	0.00000
9. STD DEV LOG	.32600	.18314	0.00000
10. GINI	.19038	.09964	0.00000
11. SIM CORR	.88940	.79630	0.00000
12. SLOPE W	27.13400	26.08800	0.00000
13. SLOPE W2	31.54000	29.37300	0.00000
14. SLOPE W3	32.07100	31.97800	0.00000
15. EXP DIF	949.32000	372.05000	0.00000
16. HICK GINI	.17243	.08358	0.00000
17. MEAN W	18.46500	11.16200	0.00000
18. STD DEV W	14.70100	5.76340	0.00000
19. ELAST W	.42302	.28831	0.00000
20. ELAST W2	.49171	.32462	0.00000
21. ELAST W3	.49999	.35340	0.00000

Variable descriptions:

1. Pupils (unweighted); Average Daily Attendance (ADA).
2. Revenues: Total local and state revenue excluding debt service and capital.
3. Wealth: State equalized assessed value. (Equalized to 20.58% of market.)
4. Districts: All districts except two, in Rio Blanco County, with extraordinarily high assessed value per pupil.

TABLE B-19

STATE -- COL
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 174
NUMBER OF PUPILS -- 518,774
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1527.30000	1317.20000	0.00000
2.	RANGE	3116.00000	3116.00000	0.00000
3.	RES RANGE	1694.00000	754.00000	0.00000
4.	FED R R	1.69230	.75475	0.00000
5.	REL MN DEV	.26560	.14278	0.00000
6.	PERM VAR	.88089	.85803	0.00000
7.	VAR	308910.00000	63438.00000	0.00000
8.	COEF VAR	.36390	.19122	0.00000
9.	STD DEV LGS	.31000	.17900	0.00000
10.	GINI	.18227	.10069	0.00000
11.	SIM CORR	.81900	.79000	0.00000
12.	SLOPE W	27.94300	26.95500	0.00000
13.	SLOPE W2	33.25100	35.33600	0.00000
14.	SLOPE W3	34.04300	36.90400	0.00000
15.	EXP DIF	1133.10000	548.81000	0.00000
16.	HICK GINI	.15790	.08347	0.00000
17.	MEAN W	21.82300	14.06900	0.00000
18.	STD DEV W	16.29100	7.38130	0.00000
19.	ELAST W	.39927	.28791	0.00000
20.	ELAST W2	.47511	.37742	0.00000
21.	ELAST W3	.48643	.39417	0.00000

Variable descriptions:

1. Pupils (unweighted): See Table B-18 (Colorado, 1972).
2. Revenues: See Table B-18 (Colorado, 1972).
3. Wealth: State equalized assessed value. (Equalized to 20.7% of market.)
4. Districts: See Table B-18 (Colorado, 1972).

TABLE B-20

STATE -- CONN
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 168
NUMBER OF PUPILS -- 636932
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1271.80000	1318.30000	0.00000
2. RANGE	1181.80000	1181.80000	0.00000
3. RES RANGE	729.09000	801.03000	0.00000
4. FED R R	.77103	.80183	0.00000
5. REL MN DEV	.13379	.13796	0.00000
6. PERM VAR	.87686	.88999	0.00000
7. VAR	48338.00000	55310.00000	0.00000
8. COEF VAR	.17287	.17840	0.00000
9. STD DEV LGS	.40940	.37820	0.00000
10. GINI	.09500	.09800	0.00000
11. SIM CORR	.61400	.63010	0.00000
12. SLOPE W	3.36680	3.12870	0.00000
13. SLOPE W2	4.80560	6.24920	0.00000
14. SLOPE W3	5.40290	5.04340	0.00000
15. EXP DIF	445.00000	498.37000	0.00000
16. HICK GINI	.06800	.07600	0.00000
17. MEAN W	79.14400	84.17900	0.00000
18. STD DEV W	39.99700	47.30900	0.00000
19. ELAST W	.20952	.19978	0.00000
20. ELAST W2	.29905	.39904	0.00000
21. ELAST W3	.33622	.32204	0.00000

Variable descriptions:

1. Pupil (unweighted): Total adjusted Resident Average Daily Membership in the state.
2. Revenues: Net Current Local Expenditures (as a measure of locally-raised revenues) plus total state aid for public schools excluding school building aid.
3. Wealth: Equalized Net Grant List (1976).
4. Districts: The 169 towns in the state with resident pupils. Regional school districts are excluded.

TABLE B-21

STATE -- FLA
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1369723
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	970.11000	953.88000	0.00000
2. RANGE	493.58000	493.58000	0.00000
3. RES RANGE	378.00000	221.46000	0.00000
4. FED R R	.46280	.26270	0.00000
5. REL MN DEV	.09130	.07310	0.00000
6. PERM VAR	.91182	.94384	0.00000
7. VAR	12513.00000	7091.50000	0.00000
8. COEF VAR	.11531	.08828	0.00000
9. STD DEV LGS	.11400	.08900	0.00000
10. GINI	.06358	.04906	0.00000
11. SIM CORR	.57319	.76347	0.00000
12. SLOPE W	3.55860	3.74280	0.00000
13. SLOPE W2	3.26910	3.76540	0.00000
14. SLOPE W3	3.33710	4.40850	0.00000
15. EXP DIF	118.72000	142.21000	0.00000
16. WICK GINI	.00123	0.00000	0.00000
17. MEAN W	35.97500	38.41300	0.00000
18. STD DEV W	18.01700	17.17800	0.00000
19. ELAST W	.13197	.15072	0.00000
20. ELAST W2	.12123	.15163	0.00000
21. ELAST W3	.12375	.17753	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Local and state revenues.
3. Wealth: Equalized Assessed Value.
4. Districts: All

TABLE B-22

STATE -- FLA
YEAR -- 1973
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1397320
NUMBER OF WEIGHTED PUPILS -- 1889821

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1179.10000	1187.30000	877.86000
2.	RANGE	607.83000	607.83000	434.62000
3.	RES RANGE	469.75000	309.32000	219.92000
4.	FED R R	.48180	.30400	.29210
5.	REL MN DEV	.09875	.09430	.05993
6.	PERM VAR	.91280	.92016	.93787
7.	VAR	21281.00000	16061.00000	5738.60000
8.	COEF VAR	.12372	.10674	.08629
9.	STD DEV LGS	.12100	.10700	.08500
10.	GINI	.06863	.05980	.04052
11.	SIM CORR	.31919	.61781	.57861
12.	SLOPE W	1.38770	3.25950	2.54410
13.	SLOPE W2	2.80790	4.69620	3.73250
14.	SLOPE W3	2.42620	4.85070	3.92400
15.	EXP DIF	143.32000	226.91000	130.02000
16.	HICK GINI	.00080	0.00000	0.00000
17.	MEAN W	49.98000	54.59200	40.36500
18.	STD DEV W	33.55300	24.02100	17.22900
19.	ELAST W	.05882	.14987	.11698
20.	ELAST W2	.11902	.21593	.17162
21.	ELAST W3	.10284	.22303	.13043

Variable descriptions:

1. a. Pupils (unweighted): See Table B-21 (Florida, 1972).
   b. Pupils (weighted): Weighted FTE, as per schedule on next page.
2. Revenues: See Table B-21 (Florida, 1972).
3. Wealth: See Table B-21 (Florida, 1972).
4. Districts: See Table B-21 (Florida, 1972).

TABLE B-23

STATE -- FLA

YEAR -- 1974

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67

NUMBER OF PUPILS -- 1416524

NUMBER OF WEIGHTED PUPILS -- 1992514

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1341.40000	1343.60000	955.21000
2.	RANGE	712.47000	712.47000	320.54000
3.	RES RANGE	416.01000	339.31000	243.47000
4.	FED R R	.35890	.28500	.28590
5.	REL MN DEV	.07585	.07383	.06783
6.	PERM VAR	.91621	.92116	.96979
7.	VAR	17674.00000	13234.00000	3586.80000
8.	COEF VAR	.09911	.08562	.06270
9.	STD DEV LGS	.09800	.08700	.06200
10.	GINI	.05413	.04824	.04095
11.	SIM CORR	.42343	.73303	.65363
12.	SLOPE W	1.79790	3.08390	2.12180
13.	SLOPE W2	1.75080	3.21940	2.10250
14.	SLOPE W3	1.78980	3.24920	1.86050
15.	EXP DIF	109.96000	176.88000	72.67900
16.	HICK GINI	.00165	0.00000	.00179
17.	MEAN W	60.56700	71.00800	50.48100
18.	STD DEV W	31.31200	27.34400	18.45800
19.	ELAST W	.08118	.16298	.11213
20.	ELAST W2	.07905	.17014	.11111
21.	ELAST W3	.08081	.17172	.09832

Variable descriptions:

1. a. Pupils (unweighted): See Table B-21 (Florida, 1972).

   b. Pupils (weighted): See Table B-22 (Florida, 1973).

2. Revenues: See Table B-21 (Florida, 1972).

3. Wealth: See Table B-21 (Florida, 1972).

4. Districts: See Table (Florida, 1972).

Weights for Various Educational Programs in Florida, 1975-76

Basic Programs	
Kindergarten and Grades 1, 2, and 3	1.234
Grades 4 through 9	1.00
Grades 10, 11, and 12	1.10
Special Programs for Exceptional Students	
Educable mentally retarded	2.30
Trainable mentally retarded	3.00
Physically handicapped	3.50
Physical and occupational therapy, part-time	6.00
Speech and hearing therapy, part-time	10.00
Deaf	4.00
Visually handicapped, part-time	10.00
Visually handicapped	3.50
Emotionally disturbed, part-time	7.50
Emotionally disturbed	3.70
Socially maladjusted	2.30
Specific learning disability, part-time	7.50
Specific learning disability	2.30
Gifted, part-time	3.00
Hospital and homebound, part-time	15.00
*Vocational-Technical Programs**	
Vocational Education I	4.26
Vocational Education II	2.64
Vocational Education III	2.18
Vocational Education IV	1.69
Vocational Education V	1.40
Vocational Education VI	1.17
Adult Education Programs	
Adult basic education and adult high school	1.28
Community service	0.675

*Vocational-technical programs are put into one of six categories depending upon the relative cost of providing the program. Most expensive are certain shop courses using a great deal of expensive equipment; least expensive are secretarial courses.

Source: Jack Leppert, Larry Huxel, Walter Garms, and Heber Fuller, "Pupil Weighting Programs in School Finance Reform," in *School Finance Reform: A Legislators' Handbook*, eds. John J. Callahan and William H. Wilken (Washington, D.C.: National Conference of State Legislatures, 1976).

TABLE B-24

STATE -- FLA
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 67
NUMBER OF PUPILS -- 1416516
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1344.30000	1374.80000	0.00000
2.	RANGE	753.44000	753.44000	0.00000
3.	RES RANGE	402.92000	359.62000	0.00000
4.	FED R R	.35560	.30570	0.00000
5.	REL MN DEV	.08314	.08560	0.00000
6.	PERM VAR	.92460	.94676	0.00000
7.	VAR	19866.00000	18055.00000	0.00000
8.	COEF VAR	.10485	.09774	0.00000
9.	STD DEV LGS	.10300	.09800	0.00000
10.	GINI	.05779	.05507	0.00000
11.	SIM CORR	.54038	.77344	0.00000
12.	SLOPE W	1.97090	3.28320	0.00000
13.	SLOPE W2	1.74060	3.36150	0.00000
14.	SLOPE W3	1.99870	3.67240	0.00000
15.	EXP DIF	138.34000	223.15000	0.00000
16.	HICK GINI	.00340	.00545	0.00000
17.	MEAN W	69.10400	79.96100	0.00000
18.	STD DEV W	38.64300	31.65500	0.00000
19.	ELAST W	.10131	.19096	0.00000
20.	ELAST W2	.08948	.19551	0.00000
21.	ELAST W3	.10274	.21359	0.00000

Variable descriptions:

See Table B-21 (Florida, 1972).

TABLE B-25

STATE -- GA

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 188

NUMBER OF PUPILS -- 1102079

NUMBER OF WEIGHTED PUPILS --

		UNIT OF ANALYSIS		
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	570.00000	628.00000	0.00000
2.	RANGE	772.00000	772.00000	0.00000
3.	RES RANGE	225.00000	772.00000	0.00000
4.	FED R R	.48280	2.80030	0.00000
5.	REL MN DEV	.09243	.21983	0.00000
6.	PERM VAR	.90945	.84879	0.00000
7.	VAR	6523.00000	35029.00000	0.00000
8.	COEF VAR	.14182	.29793	0.00000
9.	STD DEV LGS	.13368	.31078	0.00000
10.	GINI	.06870	.15770	0.00000
11.	SIM CORR	.55160	.58160	0.00000
12.	SLOPE W	8.19100	9.68100	0.00000
13.	SLOPE W2	8.50660	9.86060	0.00000
14.	SLOPE W3	9.04730	10.10700	0.00000
15.	EXP DIF	98.32700	111.67000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	16.53000	17.51400	0.00000
18.	STD DEV W	5.43800	6.66400	0.00000
19.	ELAST W	.23754	.26999	0.00000
20.	ELAST W2	.24669	.27500	0.00000
21.	ELAST W3	.26237	.28187	0.00000

Variable descriptions:

1. Pupils (unweighted): Average Daily Membership (ADM).
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: Equalized assessed valuation.
4. Districts: All.

TABLE B-26

STATE -- GA
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS --188
NUMBER OF PUPILS -- 1077114
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	845.00000	876.00000	0.00000
2.	RANGE	8385.00000	8385.00000	0.00000
3.	RES RANGE	444.00000	1015.00000	0.00000
4.	FED R R	.70290	2.76330	0.00000
5.	REL MN DEV	.17444	.21123	0.00000
6.	PERM VAR	.88197	.83536	0.00000
7.	VAR	334640.00000	86683.00000	0.00000
8.	COEF VAR	.68462	.33620	0.00000
9.	STD DEV LGS	.32914	.34770	0.00000
10.	GINI	.13370	.15680	0.00000
11.	SIM CORR	.93220	.93050	0.00000
12.	SLOPE W	20.96900	20.95000	0.00000
13.	SLOPE W2	6.68460	7.51690	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	344.72000	377.96000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	27.79800	27.35300	0.00000
18.	STD DEV W	25.71700	12.40500	0.00000
19.	ELAST W	.68982	.65416	0.00000
20.	ELAST W2	.21990	.23471	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

See Table B-25 (Georgia, 1972).

TABLE B-27

STATE -- ILL
YEAR -- 1972
DISTRICT TYPE -- UNIT

NUMBER OF DISTRICTS -- 413
NUMBER OF PUPILS -- 1252221
NUMBER OF WEIGHTED PUPILS --1580303

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	950.74000	1035.60000	820.64000
2.	RANGE	939.85000	939.85000	774.04000
3.	RES RANGE	336.83000	252.11000	267.57000
4.	FED R R	.39370	.28860	.35330
5.	REL MN DEV	.06127	.08526	.09570
6.	PERM VAR	.94400	.94760	.87900
7.	VAR	11157.00000	9830.60000	9849.60000
8.	COEF VAR	.10661	.09574	.12094
9.	STD DEV LGS	.10200	.09700	.12000
10.	GINI	.05680	.05250	.05240
11.	SIM CORR	.67844	.59011	.50463
12.	SLOPE W	6.43260	8.12780	8.42390
13.	SLOPE W2	5.79060	10.94600	11.21400
14.	SLOPE W3	7.63600	10.59500	11.04700
15.	EXP DIF	165.44600	153.23000	130.73000
16.	HICK GINI	.04060	.03640	0.00000
17.	MEAN W	24.16700	22.88400	18.13300
18.	STD DEV W	11.14000	7.19870	5.94530
19.	ELAST W	.15704	.17960	.19614
20.	ELAST W2	.14137	.24188	.24779
21.	ELAST W3	.13647	.23412	.24410

Variable descriptions:

1. a. Pupils (unweighted): Average Daily Attendance (ADA).

   b. Pupils (weighted): Title I weighted average daily attendance (TWADA). Title I students given additional weighting based on number and concentration of Title I students in the district.

2. Revenues: Local revenues for operations, general state aid, and state categorical aid, excluding debt service and capital.

3. Wealth: Equalized assessed valuation.

4. Districts: Al K-12 Unit districts.

TABLE B-28

STATE -- ILL
YEAR -- 1975
DISTRICT TYPE -- UNIT

NUMBER OF DISTRICTS -- 444
NUMBER OF PUPILS -- 1273036
NUMBER OF WEIGHTED PUPILS -- 1579633

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1166.60000	1396.20000	1125.20000
2.	RANGE	1051.30000	1091.30000	1061.90000
3.	RES RANGE	506.61000	769.75000	379.52000
4.	FED R R	.51890	.77740	.42000
5.	REL MN DEV	.10656	.19633	.11126
6.	PERM VAR	.91080	.91330	.92060
7.	VAR	26714.00000	90106.00000	20130.00000
8.	COEF VAR	.13774	.21500	.12609
9.	STD DEV LGS	.13300	.21800	.13100
10.	GINI	.07520	.11980	.06780
11.	SIM CORR	.30130	.24528	.10640
12.	SLOPE W	3.73140	9.11300	2.18140
13.	SLOPE W2	1.65210	14.20100	3.35710
14.	SLOPE W3	1.75510	13.33100	3.58660
15.	EXP DIF	29.79300	219.64000	52.46500
16.	HICK GINI	.01220	0.00000	0.00000
17.	MEAN W	26.87600	25.05300	20.19000
18.	STD DEV W	13.19700	8.07950	6.92030
19.	ELAST W	.08452	.16352	.03914
20.	ELAST W2	.03742	.25482	.06024
21.	ELAST W3	.03976	.23721	.06436

Variable descriptions:

See Table B-27 (Illinois-Unit, 1972).

TABLE B-29

STATE -- ILL
YEAR -- 1972
DISTRICT TYPE -- SECONDARY

NUMBER OF DISTRICTS -- 142
NUMBER OF PUPILS -- 257,633
NUMBER OF WEIGHTED PUPILS -- 324,438

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1333.00000	1397.70000	1109.90000
2.	RANGE	1592.30000	1592.30000	1274.70000
3.	RES RANGE	954.07000	[illegible]92.90000	715.40000
4.	FED R R	.95830	.87920	.88270
5.	REL MN DEV	.18349	.15848	.17229
6.	PERM VAR	.88330	.88050	.88780
7.	VAR	100780.00000	80988.00000	52835.00000
8.	COEF VAR	.23816	.20561	.20710
9.	STD DEV LGS	.22000	.20100	.20400
10.	GINI	.12570	.11460	.11660
11.	SIM CORR	.75219	.65067	.66567
12.	SLOPE W	6.77170	8.84230	9.00140
13.	SLOPE W2	7.45270	10.01100	10.24400
14.	SLOPE W3	7.48650	9.98670	10.22000
15.	EXP DIF	515.96000	423.75000	346.40000
16.	HICK GINI	.09140	.07620	.07810
17.	MEAN W	72.58300	64.80600	51.46200
18.	STD DEV W	35.26300	21.26300	16.99800
19.	ELAST W	.36872	.40998	.41736
20.	ELAST W2	.40581	.46417	.47498
21.	ELAST W3	.40765	.46305	.47386

Variable descriptions:

1. a. Pupils (unweighted) See Table B-27 (Illinois-Unit, 1972).
   b. Pupils (weighted) See Table B-27 (Illinois-Unit, 1972).
2. Revenues: See Table B-27 (Illinois-Unit, 1972).
3. Wealth: See Table B-27 (Illinois-Unit, 1972).
4. Districts: All Secondary districts.

TABLE B-30

STATE -- ILL

YEAR -- 1975

DISTRICT TYPE -- SECONDARY

NUMBER OF DISTRICTS -- 129

NUMBER OF PUPILS -- 261371

NUMBER OF WEIGHTED PUPILS -- 329718

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNIT OF ANALYSIS UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1644.20000	1736.40000	1376.50000
2. RANGE	1615.10000	1615.10000	1290.00000
3. RES RANGE	1076.60000	1137.90000	935.74000
4. FED R R	.84170	.86940	.91820
5. REL MN DEV	.15105	.14133	.14584
6. PERM VAR	.89620	.90300	.89710
7. VAR	102340.00000	102460.00000	68252.00000
8. COEF VAR	.19456	.18435	.18980
9. STD DEV LGS	.18300	.17800	.18400
10. GINI	.10470	.10120	.10470
11. SIM CORR	.53719	.47796	.49303
12. SLOPE W	4.89810	6.53050	6.87350
13. SLOPE W2	4.90580	7.28830	7.86670
14. SLOPE W3	4.94550	7.93640	8.39960
15. EXP DIF	330.97000	365.51000	304.35000
16. HICK GINI	.05030	.05050	.05350
17. MEAN W	74.07500	70.40200	55.80800
18. STD DEV W	35.08500	23.42800	18.73900
19. ELAST W	.22067	.26478	.27868
20. ELAST W2	.22102	.29550	.31894
21. ELAST W3	.22281	.32178	.34055

Variable descriptions:

1. a. Pupils (unweighted): See Table B-27 (Illinois-Unit, 1972).

   b. Pupils (weighted): See Table B-27 (Illinois-Unit, 1972).

2. Revenues: See Table B-27 (Illinois-Unit, 1972).

3. Wealth: See Table B-27 (Illinois-Unit, 1972).

4. Districts: All Secondary Districts.

TABLE B-31

STATE -- ILL

YEAR -- 1972

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 489

NUMBER OF PUPILS -- 559463

NUMBER OF WEIGHTED PUPILS -- 570940

		UNIT OF ANALYSIS		
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	904.24000	930.28000	911.72000
2.	RANGE	1977.70000	1977.70000	1843.50000
3.	RES RANGE	593.47000	574.30000	612.14000
4.	FED R R	.82600	.78210	.88080
5.	REL MN DEV	.15646	.14106	.15127
6.	PERM VAR	.92110	.92860	.91300
7.	VAR	44097.00000	34552.00000	36913.00000
8.	COEF VAR	.23223	.19981	.21073
9.	STD DEV LGS	.19700	.17900	.19300
10.	GINI	.10830	.10090	.10810
11.	SIM CORR	.71486	.70372	.70628
12.	SLOPE W	4.22340	7.31950	7.73390
13.	SLOPE W2	6.07610	8.81050	9.37860
14.	SLOPE W3	5.76890	8.90090	9.64910
15.	EXP DIF	405.61000	317.92000	339.16000
16.	HICK GINI	.07820	.07530	.08070
17.	MEAN W	36.08700	29.50200	28.90800
18.	STD DEV W	35.28700	17.85000	17.54600
19.	ELAST W	.16855	.23212	.24522
20.	ELAST W2	.24249	.27941	.29737
21.	ELAST W3	.23023	.28227	.30595

Variable descriptions:

1. a. Pupils (unweighted): See Table B-27 (Illinois-Unit, 1972).
   b. Pupils (weighted): See Table B-27 (Illinois-Unit, 1972).
2. Revenues: See Table B-27 (Illinois-Unit, 1972).
3. Wealth: See Table B-27 (Illinois-Unit, 1972).
4. Districts: All Elementary districts.

TABLE B-32

STATE -- ILL
YEAR -- 1975
DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 448
NUMBER OF PUPILS -- 506529
NUMBER OF WEIGHTED PUPILS -- 519179

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1178.90000	1246.40000	1216.10000
2.	RANGE	2788.00000	2758.00000	2781.00000
3.	RES RANGE	877.83000	801.53000	819.95000
4.	FED R R	1.04380	.91450	.96770
5.	REL MN DEV	.18715	.14568	.15655
6.	PERM VAR	.85270	.85770	.86660
7.	VAR	96564.00000	65395.00000	68271.00000
8.	COEF VAR	.26360	.20517	.21486
9.	STD DEV LGS	.23300	.19900	.20700
10.	GINI	.13280	.10900	.11500
11.	SIM CORR	.67070	.51820	.54572
12.	SLOPE W	4.83850	5.96190	6.47430
13.	SLOPE W2	5.84360	6.45050	7.25500
14.	SLOPE W3	4.69220	6.19970	7.25570
15.	EXP DIF	395.11000	275.16000	319.60000
16.	HICK GINI	.07100	.05100	.05930
17.	MEAN W	43.10400	36.18600	35.30400
18.	STD DEV W	43.07500	22.22700	22.02400
19.	ELAST W	.17691	.17309	.18795
20.	ELAST W2	.21366	.18727	.21062
21.	ELAST W3	.17156	.17999	.21064

Variable descriptions:

1. a. Pupils (unweighted): See Table B-27 (Illinois-Unit, 1972).
   b. Pupils (weighted): See Table B-27 (Illinois-Unit, 1972).
2. Revenues: See Table B-27 (Illinois-Unit, 1972).
3. Wealth: See Table B-27 (Illinois-Unit, 1972).
4. Districts: All Elementary districts.

TABLE B-33

STATE -- KANS

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 309

NUMBER OF PUPILS -- 469458

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1011.00000	889.00000	0.00000
2.	RANGE	3397.00000	3397.00000	0.00000
3.	RES RANGE	884.00000	650.00000	0.00000
4.	FED P R	1.34970	1.06790	0.00000
5.	REL MN DEV	.22645	.17683	0.00000
6.	PERM VAR	.81482	.82746	0.00000
7.	VAR	103740.00000	53850.00000	0.00000
8.	COEF VAR	.31865	.26113	0.00000
9.	STD DEV LGS	.29598	.29135	0.00000
10.	GINI	.16030	.13240	0.00000
11.	SIM CORR	.56950	.57080	0.00000
12.	SLOPE W	9.74500	9.78600	0.00000
13.	SLOPE W2	11.12700	11.21500	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	419.53000	420.06000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	35.21700	26.44300	0.00000
18.	STD DEV W	18.82200	10.63400	0.00000
19.	ELAST W	.33946	.29108	0.00000
20.	ELAST W2	.38760	.32359	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

1. Pupils: Average Daily Membership (ADM).
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: Equalized Assessed Valuation.
4. Districts: All.

TABLE B-34

STATE -- KANS

YEAR -- 1974

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 308

NUMBER OF PUPILS -- 447033

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1946.00000	1484.00000	0.00000
2.	RANGE	4553.00000	4553.00000	0.00000
3.	RES RANGE	2199.00000	1320.00000	0.00000
4.	FED R R	1.95750	1.30840	0.00000
5.	REL MN DEV	.28616	.21761	0.00000
6.	PERM VAR	.78572	.88501	0.00000
7.	VAR	532040.00000	221410.00000	0.00000
8.	COEF VAR	.37482	.31708	0.00000
9.	STD DEV LGS	.35318	.28951	0.00000
10.	GINI	.20050	.15580	0.00000
11.	SIM CORR	.84490	.84630	0.00000
12.	SLOPE W	20.93100	21.02100	0.00000
13.	SLOPE W2	25.15900	25.32400	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	1484.00000	1485.40000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	52.03400	36.57900	0.00000
18.	STD DEV W	29.44400	17.49400	0.00000
19.	ELAST W	.55967	.51814	0.00000
20.	ELAST W2	.67273	.62421	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

See Table B-33 (Kansas, 1972).

TABLE B-35

STATE -- KTY
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 189
NUMBER OF PUPILS -- 656,247
NUMBER OF WEIGHTED PUPILS --

	UNIT OF ANALYSIS		
MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	615.48000	659.92000	0.00000
2. RANGE	559.83000	559.83000	0.00000
3. RES RANGE	282.06000	407.32000	0.00000
4. FED R R	.54652	.78834	0.00000
5. REL MN DEV	.11001	.16509	0.00000
6. PERM VAR	.90067	.92096	0.00000
7. VAR	8491.80000	16354.00000	0.00000
8. COEF VAR	.14972	.19378	0.00000
9. STD DEV LGS	.13800	.18598	0.00000
10. GINI	.07718	.10674	0.00000
11. SIM CORR	.60660	.70890	0.00000
12. SLOPE W	3.75100	6.36800	0.00000
13. SLOPE W2	3.49500	6.66900	0.00000
14. SLOPE W3	3.15700	8.91100	0.00000
15. EXP DIF	94.08800	336.40000	0.00000
16. HICK GINI	.04578	.08229	0.00000
17. MEAN W	36.30000	39.26200	0.00000
18. STD DEV W	14.90200	14.23600	0.00000
19. ELAST W	.22123	.37886	0.00000
20. ELAST W2	.20613	.39677	0.00000
21. ELAST W3	.18619	.53016	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: State equalized assessed valuation. (Equalized to 100% of market value.)
4. Districts: All

TABLE B-36

STATE -- KTY
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 182
NUMBER OF PUPILS -- 622483
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	865.59000	950.47000	0.00000
2.	RANGE	838.42000	838.42000	0.00000
3.	RES RANGE	307.85000	651.03000	0.00000
4.	FED R R	.41961	.88407	0.00000
5.	REL MN DEV	.10780	.19358	0.00000
6.	PERM VAR	.90426	.92333	0.00000
7.	VAR	17693.00000	51082.00000	0.00000
8.	COEF VAR	.15367	.23779	0.00000
9.	STD DEV LGS	.13800	.21852	0.00000
10.	GINI	.07619	.12463	0.00000
11.	SIM CORR	.57330	.78380	0.00000
12.	SLOPE W	4.08500	8.26000	0.00000
13.	SLOPE W2	3.75400	8.28700	0.00000
14.	SLOPE W3	3.05900	10.17500	0.00000
15.	EXP DIF	114.18000	416.70000	0.00000
16.	HICK GINI	.04520	.10573	0.00000
17.	MEAN W	48.36400	55.32300	0.00000
18.	STD DEV W	18.66500	21.44600	0.00000
19.	ELAST W	.22825	.48078	0.00000
20.	ELAST W2	.20975	.48235	0.00000
21.	ELAST W3	.17092	.59225	0.00000

Variable descriptions:

See Table B-35 (Kentucky, 1972).

TABLE B-37

STATE -- LOU
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 66
NUMBER OF PUPILS -- 840359
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	705.00000	705.00000	0.00000
2.	RANGE	405.00000	405.00000	0.00000
3.	RES RANGE	244.00000	179.00000	0.00000
4.	FED R R	.40956	.29388	0.00000
5.	REL MN DEV	.07963	.07259	0.00000
6.	PERM VAR	.90942	.92799	0.00000
7.	VAR	5156.00000	3685.00000	0.00000
8.	COEF VAR	.10208	.08597	0.00000
9.	STD DEV LGS	.09950	.08625	0.00000
10.	GINI	.05571	.04841	0.00000
11.	SIM CORR	.17407	.38615	0.00000
12.	SLOPE W	5.17260	6.32670	0.00000
13.	SLOPE W2	15.36200	11.26700	0.00000
14.	SLOPE W3	12.63400	11.08600	0.00000
15.	EXP DIF	0.00000	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	6.31800	7.23500	0.00000
18.	STD DEV W	5.97000	3.24700	0.00000
19.	ELAST W	.02851	.06493	0.00000
20.	ELAST W2	.13806	.11563	0.00000
21.	ELAST W3	.11354	.11377	0.00000

Variable descriptions:

1. Pupils (unweighted); Average Daily Membership (ADM).
2. Revenues: Local and State Revenues: Local revenues include property taxes in the following categories: constitutional tax; special maintenance and operations tax; special leeway tax -- at both the parish and district/ward level. Revenues also include: rents, leases, sales taxes, tuition, special appropriations, interest, grants, sale of junk, and miscellaneous. State revenues are from the school equalization fund, sixteenth section lands (interest), codofil (French language), revenue sharing, severance tax, contribution to teacher retirement, the state portion of vocational education, crippled and exceptional children's fund, and adult education.
3. Wealth: Assessed Value. (Note Equalized Assessed Value is not used in aid distribution until 1976-77.)
4. Districts: All

TABLE B-38

STATE -- LOU

YEAR -- 1975

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 66

NUMBER OF PUPILS --830550

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1039.00000	1049.00000	0.00000
2. RANGE	585.00000	585.00000	0.00000
3. RES RANGE	399.00000	283.00000	0.00000
4. FED R R	.44165	.31165	0.00000
5. REL MN DEV	.08692	.07963	0.00000
6. PERM VAR	.92144	.90618	0.00000
7. VAR	15195.00000	10135.00000	0.00000
8. COEF VAR	.11860	.09594	0.00000
9. STD DEV LGS	.11038	.09492	0.00000
10. GINI	.06111	.05342	0.00000
11. SIM CORR	.28082	.36969	0.00000
12. SLOPE W	6.95350	8.63250	0.00000
13. SLOPE W2	28.37100	16.49600	0.00000
14. SLOPE W3	25.83300	17.01900	0.00000
15. EXP DIF	0.00000	0.00000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	6.39400	7.19500	0.00000
18. STD DEV W	5.01600	3.80100	0.00000
19. ELAST W	.04279	.05921	0.00000
20. ELAST W2	.17459	.11314	0.00000
21. ELAST W3	.14667	.11673	0.00000

Variable descriptions:

1. Pupils (unweighted): See Table B-37 (Louisiana 1972).
2. Revenues: Same as Louisiana 1972 but local revenues also include food service collections and state revenues include all vocational education revenues.
3. Wealth: See Table B-37 (Louisiana, 1972).
4. Districts: See Table B-37 (Louisiana, 1972).

TABLE B-39

STATE -- MAINE
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 265
NUMBER OF PUPILS -- 246676
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	938.00000	524.00000	0.00000
2.	RANGE	9919.00000	3919.00000	0.00000
3.	RES RANGE	1180.00000	548.00000	0.00000
4.	FED R R	2.32650	.97030	0.00000
5.	REL MN DEV	.30892	.15661	0.00000
6.	PERM VAR	.80590	.85029	0.00000
7.	VAR	463490.00000	35088.00000	0.00000
8.	COEF VAR	.72546	.22720	0.00000
9.	STD DEV LGS	.38544	.22692	0.00000
10.	GINI	.22510	.11550	0.00000
11.	SIM CORR	.57670	.57680	0.00000
12.	SLOPE W	3.13000	3.13300	0.00000
13.	SLOPE W2	2.11180	2.13550	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	530.81000	519.11000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	60.89500	30.28300	0.00000
18.	STD DEV W	125.44000	21.64100	0.00000
19.	ELAST W	.20320	.11514	0.00000
20.	ELAST W2	.13710	.07848	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

1. Pupils: Average Daily Membership (ADM)
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: Equalized Assessed Valuation.
4. Districts: All.

TABLE B-40

STATE -- MAINE

YEAR -- 1975

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 275

NUMBER OF PUPILS -- 246621

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNIT OF ANALYSIS UNWEIGHTED PUPIL	UNIT OF ANALYSIS WEIGHTED PUPIL
1.	MEAN EXP	1113.00000	1036.00000	0.00000
2.	RANGE	3379.00000	3379.00000	0.00000
3.	RES RANGE	1014.00000	619.00000	0.00000
4.	FED R R	1.40190	.85510	0.00000
5.	REL MN DEV	.21164	.13606	0.00000
6.	PERM VAR	.85106	.87994	0.00000
7.	VAR	134930.00000	36023.00000	0.00000
8.	COEF VAR	.33014	.18319	0.00000
9.	STD DEV LGS	.29195	.20336	0.00000
10.	GINI	.15360	.09820	0.00000
11.	SIM CORR	.31500	.31600	0.00000
12.	SLOPE W	.85400	.86300	0.00000
13.	SLOPE W2	2.39330	2.40070	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	649.50000	629.71000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	77.41500	42.51900	0.00000
18.	STD DEV W	135.44000	31.42500	0.00000
19.	ELAST W	.05940	.03542	0.00000
20.	ELAST W2	.16647	.09853	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

See Table B-39 (Maine, 1972).

TABLE B-41

STATE -- MRLND
YEAR -- 1976
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 24
NUMBER OF PUPILS -- 829094
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1476.00000	1617.00000	0.00000
2. RANGE	938.00000	938.00000	0.00000
3. RES RANGE	584.00000	825.00000	0.00000
4. FED R R	.50040	.64450	0.00000
5. REL MN DEV	.11831	.12970	0.00000
6. PERM VAR	.82517	.95853	0.00000
7. VAR	46557.00000	61899.00000	0.00000
8. COEF VAR	.14619	.15390	0.00000
9. STD DEV LGS	.14059	.14975	0.00000
10. GINI	.07970	.08400	0.00000
11. SIM CORR	.68430	.70710	0.00000
12. SLOPE W	8.56700	9.52400	0.00000
13. SLOPE W2	13.58200	14.06600	0.00000
14. SLOPE W3	15.12100	16.02900	0.00000
15. EXP DIF	521.50000	545.68000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	47.54800	49.84900	0.00000
18. STD DEV W	17.23500	15.67000	0.00000
19. ELAST W	.27598	.29361	0.00000
20. ELAST W2	.43753	.43363	0.00000
21. ELAST W3	.48711	.49414	0.00000

Variable descriptions:

1. Pupils: Average Daily Membership (ADM).
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: Equalized Assessed Valuation.
4. Districts: All.

TABLE B-42

STATE -- MASS
NUMBER OF DISTRICTS -- 351

YEAR -- 1975
NUMBER OF PUPILS -- 1144459

DISTRICT TYPE -- 1
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1646.00000	1597.00000	0.00000
2.	RANGE	4559.00000	4559.00000	0.00000
3.	RES RANGE	930.00000	1421.00000	0.00000
4.	FED R R	.73070	1.09770	0.00000
5.	REL MN DEV	.13162	.15829	0.00000
6.	PERM VAR	.89003	.91002	0.00000
7.	VAR	120760.00000	144130.00000	0.00000
8.	COEF VAR	.21111	.22374	0.00000
9.	STD DEV LGS	.17646	.20094	0.00000
10.	GINI	.09660	.11200	0.00000
11.	SIM CORR	.63780	.62260	0.00000
12.	SLOPE W	1.52200	1.52100	0.00000
13.	SLOPE W2	2.06000	2.06500	0.00000
14.	SLOPE W3	0.00000	0.00000	0.00000
15.	EXP DIF	600.91000	590.85000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	81.68400	55.13900	0.00000
18.	STD DEV W	145.65000	33.75800	0.00000
19.	ELAST W	.07553	.04942	0.00000
20.	ELAST W2	.10223	.06710	0.00000
21.	ELAST W3	0.00000	0.00000	0.00000

Variable descriptions:

1. Pupils: Average Daily Membership (ADM).
2. Revenues: Expenditures from local and state revenues, with minor exceptions, excluding debt service and capital.
3. Wealth: Equalized Assessed Valuation.
4. Districts: All.

TABLE B-43

STATE -- MICH
YEAR -- 1971
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 524
NUMBER OF PUPILS -- 2,179,299
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	835.25000	882.42000	0.00000
2. RANGE	847.72000	847.72000	0.00000
3. RES RANGE	354.36000	422.06000	0.00000
4. FED R R	.50400	.58704	0.00000
5. REL MN DEV	.10154	.10834	0.00000
6. PERM VAR	.93057	.92506	0.00000
7. VAR	14167.00000	17151.00000	0.00000
8. COEF VAR	.14250	.14841	0.00000
9. STD DEV LGS	.13045	.13901	0.00000
10. GINI	.07233	.07800	0.00000
11. SIM CORR	.60040	.71340	0.00000
12. SLOPE W	3.95270	6.16590	0.00000
13. SLOPE W2	4.13870	6.25490	0.00000
14. SLOPE W3	4.11770	6.36690	0.00000
15. EXP DIF	147.32000	139.51000	0.00000
16. HICK GINI	.04274	.05465	0.00000
17. MEAN W	34.85000	37.79400	0.00000
18. STD DEV W	13.08000	15.15200	0.00000
19. ELAST W	.16492	.26409	0.00000
20. ELAST W2	.17268	.26790	0.00000
21. ELAST W3	.17181	.27269	0.00000

Variable descriptions:

1. Pupils (unweighted): State aid membership defined as the number of pupils legally enrolled at the close of school on the fourth Friday following Labor Day.
2. Revenues: State and local revenues excluding revenues for debt service and capital.
3. Wealth: State equalized assessed value.
4. Districts: All

TABLE B-44

STATE -- MICH

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 523

NUMBER OF PUPILS -- 2157133

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	915.00000	947.64000	0.00000
2.	RANGE	1228.50000	1228.50000	0.00000
3.	RES RANGE	386.89000	439.12000	0.00000
4.	FED R R	.50400	.55479	0.00000
5.	REL MN DEV	.10214	.11058	0.00000
6.	PERM VAR	.93493	.91482	0.00000
7.	VAR	17984.00000	21398.00000	0.00000
8.	COEF VAR	.14640	.15436	0.00000
9.	STD DEV LGS	.13159	.14353	0.00000
10.	GINI	.07221	.08138	0.00000
11.	SIM CORR	.59916	.62802	0.00000
12.	SLOPE W	3.86800	5.57900	0.00000
13.	SLOPE W2	3.79610	5.57100	0.00000
14.	SLOPE W3	3.84380	5.65680	0.00000
15.	EXP DIF	150.82000	181.13000	0.00000
16.	HICK GINI	.04275	.05038	0.00000
17.	MEAN W	39.45600	40.79300	0.00000
18.	STD DEV W	20.77300	16.46600	0.00000
19.	ELAST W	.16239	.24016	0.00000
20.	ELAST W2	.15937	.25981	0.00000
21.	ELAST W3	.16137	.24351	0.00000

Variables descriptions:

See Table B-43 (Michigan 1971).

TABLE B-45

STATE -- MICH
YEAR -- 1973
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 523
NUMBER OF PUPILS --2,121,090
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1022.70000	1079.30000	0.00000
2. RANGE	1130.80000	1130.80000	0.00000
3. RES RANGE	459.40000	497.99000	0.00000
4. FED R R	.54976	.55472	0.00000
5. REL MN DEV	.09794	.09522	0.00000
6. PERM VAR	.92228	.90478	0.00000
7. VAR	20679.00000	21074.00000	0.00000
8. COEF VAR	.14061	.13734	0.00000
9. STD DEV LGS	.13031	.13016	0.00000
10. GINI	.07170	.07138	0.00000
11. SIM CORR	.58254	.63670	0.00000
12. SLOPE W	3.50470	5.20920	0.00000
13. SLOPE W2	3.46520	5.49890	0.00000
14. SLOPE W3	3.04790	5.27480	0.00000
15. EXP DIF	142.55000	139.81000	0.00000
16. HICK GINI	.03614	.04415	0.00000
17. MEAN W	42.22900	44.15000	0.00000
18. STD DEV W	23.90200	18.11900	0.00000
19. ELAST W	.14471	.21309	0.00000
20. ELAST W2	.14308	.22494	0.00000
21. ELAST W3	.12585	.21577	0.00000

Variable descriptions:

See Table B-43 (Michigan 1971)

TABLE B-46

STATE -- MICH NUMBER OF DISTRICTS -- 523

YEAR -- 1974 NUMBER OF PUPILS --2,100,243

DISTRICT TYPE -- 1 NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1131.90000	1189.10000	0.00000
2. RANGE	1159.50000	1158.50000	0.00000
3. RES RANGE	473.18000	536.95000	0.00000
4. FED R R	.50393	.55467	0.00000
5. REL MN DEV	.09740	.09339	0.00000
6. PERM VAR	.92079	.92287	0.00000
7. VAR	22787.00000	24657.00000	0.00000
8. COEF VAR	.13337	.13206	0.00000
9. STD DEV LGS	.12514	.12592	0.00000
10. GINI	.06976	.06965	0.00000
11. SIM CORR	.51887	.61423	0.00000
12. SLOPE W	2.71350	4.68510	0.00000
13. SLOPE W2	3.29720	5.25500	0.00000
14. SLOPE W3	2.98490	4.82350	0.00000
15. EXP DIF	170.41000	197.32000	0.00000
16. HICK GINI	.03228	.04036	0.00000
17. MEAN W	47.81600	48.55600	0.00000
18. STD DEV W	28.86500	20.58600	0.00000
19. ELAST W	.11463	.19131	0.00000
20. ELAST W2	.13929	.21458	0.00000
21. ELAST W3	.12609	.19696	0.00000

Variable descriptions:

See Table B-43 (Michigan, 1971)

TABLE B-47

STATE -- MINN
YEAR -- 1971
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS --435
NUMBER OF PUPILS -- 904,658
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS: DISTRICT	UNIT OF ANALYSIS: UNWEIGHTED PUPIL	UNIT OF ANALYSIS: WEIGHTED PUPIL
1. MEAN EXP	948.59000	972.66000	0.00000
2. RANGE	1430.00000	1450.00000	0.00000
3. RES RANGE	444.00000	401.00000	0.00000
4. FED R R	.57963	.50440	0.00000
5. REL MN DEV	.11240	.10352	0.00000
6. PERM VAR	.90666	.91754	0.00000
7. VAR	24115.00000	22009.00000	0.00000
8. COEF VAR	.16371	.15252	0.00000
9. STD DEV LGS	.15100	.14737	0.00000
10. GINI	.08169	.07611	0.00000
11. SIM CORR	.25970	.41270	0.00000
12. SLOPE W	6.62800	12.95300	0.00000
13. SLOPE W2	5.80300	11.98400	0.00000
14. SLOPE W3	1.70000	10.88200	0.00000
15. EXP DIF	11.22800	100.35000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	10.30900	10.98400	0.00000
18. STD DEV W	6.08500	4.72730	0.00000
19. ELAST W	.07203	.14627	0.00000
20. ELAST W2	.06307	.13533	0.00000
21. ELAST W3	.01848	.12289	0.00000

Variable descriptions:

1. Pupils: Average Daily Membership (ADM).
2. Revenues: Total state and local revenues excluding debt service and capital.
3. Wealth: Total assessed valuation. (Equalized to 27.49% of market value.)
4. Districts: All districts except two with extraordinarily low property value per pupil.

TABLE B-48

STATE -- MINN
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 435
NUMBER OF PUPILS -- 873,057
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY		UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1619.30000	1354.20000	0.00000
2.	RANGE	1083.00000	1083.00000	0.00000
3.	RES RANGE	506.00000	562.00000	0.00000
4.	FED R R	.45668	.49779	0.00000
5.	REL MN DEV	.09554	.09916	0.00000
6.	PERM VAR	.91103	.92969	0.00000
7.	VAR	34052.00000	28795.00000	0.00000
8.	COEF VAR	.13988	.12531	0.00000
9.	STD DEV LGS	.12500	.12207	0.00000
10.	GINI	.06852	.06959	0.00000
11.	SIM CORR	.11030	.41110	0.00000
12.	SLOPE W	2.05800	10.96500	0.00000
13.	SLOPE W2	4.54800	13.80700	0.00000
14.	SLOPE W3	3.49500	13.66500	0.00000
15.	EXP DIF	67.22500	173.89000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	15.45600	15.31400	0.00000
18.	STD DEV W	9.89300	6.36230	0.00000
19.	ELAST W	.02411	.12400	0.00000
20.	ELAST W2	.05328	.15614	0.00000
21.	ELAST W3	.04094	.15453	0.00000

Variable descriptions:

1. Pupils (unweighted): See Table B-47 (Minnesota, 1971).
2. Revenues: See Table B-47 (Minnesota, 1971).
3. Wealth: Total assessed valuation (Equalized to 22.06% of market value.)
4. Districts: See Table B-47 (Minnesota, 1971).

TABLE B-49

STATE -- MISS
YEAR -- 1971
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 150
NUMBER OF PUPILS -- 526424
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	464.00000	478.00000	0.00000
2.	RANGE	333.00000	333.00000	0.00000
3.	RES RANGE	186.00000	302.00000	0.00000
4.	FED R R	.48369	.77926	0.00000
5.	REL MN DEV	.10281	.12267	0.00000
6.	PERM VAR	.91856	.92355	0.00000
7.	VAR	5613.00000	5710.00000	0.00000
8.	COEF VAR	.12956	.15796	0.00000
9.	STD DEV LGS	.16444	.14841	0.00000
10.	GINI	.07080	.08431	0.00000
11.	SIM CORR	.41767	.73980	0.00000
12.	SLOPE W	2.07140	1.75630	0.00000
13.	SLOPE W2	4.97400	4.75650	0.00000
14.	SLOPE W3	4.55030	2.14480	0.00000
15.	EXP DIF	0.00000	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	5.59600	14.82400	0.00000
18.	STD DEV W	12.16100	11.85000	0.00000
19.	ELAST W	.02498	.05447	0.00000
20.	ELAST W2	.05999	.14751	0.00000
21.	ELAST W3	.05488	.06652	0.00000

Variable descriptions:

1. Pupils (unweighted): End of first month enrollment.

2. Revenues: Local and State Revenues: Local revenues include all revenues from local sources: property taxes; mineral lease tax; other taxes; tuition and transportation fees; sixteenth section income; and revenues from intermediate sources. State revenues are for the minimum program, vocational education, community funds, the severance tax, homestead reimbursements, driver education, adult education, and textbooks. However, since local revenues include property taxes for capital purposes, expendutures for capital and debt services are excluded from the revenue total.

3. Wealth: Assessed property valuation. (Note, not equalized.)

4. Districts: All

TABLE B-50

STATE -- MISS
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 150
NUMBER OF PUPILS -- 509428
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	725.00000	744.00000	0.00000
2.	RANGE	540.00000	540.00000	0.00000
3.	RES RANGE	272.00000	485.00000	0.00000
4.	FED R R	.45743	.78678	0.00000
5.	REL MN DEV	.08697	.10907	0.00000
6.	PERM VAR	.91432	.92618	0.00000
7.	VAR	6848.00000	13138.00000	0.00000
8.	COEF VAR	.11409	.15400	0.00000
9.	STD DEV LGS	.11014	.14133	0.00000
10.	GINI	.06193	.07856	0.00000
11.	SIM CORR	.47717	.79241	0.00000
12.	SLOPE W	2.73820	2.47750	0.00000
13.	SLOPE W2	4.93260	4.26670	0.00000
14.	SLOPE W3	4.69310	5.51570	0.00000
15.	EXP DIF	0.00000	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	6.80700	17.57000	0.00000
18.	STD DEV W	14.46900	14.11500	0.00000
19.	ELAST W	.02571	.05851	0.00000
20.	ELAST W2	.04631	.10076	0.00000
21.	ELAST W3	.04406	.13026	0.00000

Valuable descriptions:

See Table B-49(Mississippi 1971).

TABLE B-51

STATE -- MO
YEAR -- 1974
DISTRICT TYPE -- UNIFIED

NUMBER OF DISTRICTS -- 455
NUMBER OF PUPILS -- 848,858
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	909.83000	991.72000	0.00000
2.	RANGE	2283.90000	2283.90000	0.00000
3.	RES RANGE	425.09000	507.11000	0.00000
4.	FED R R	.56714	.65984	0.00000
5.	REL MN DEV	.11769	.14013	0.00000
6.	PERM VAR	.87463	.92622	0.00000
7.	VAR	29734.00000	39157.00000	0.00000
8.	COEF VAR	.18971	.19953	0.00000
9.	STD DEV LGS	.15300	.17461	0.00000
10.	GINI	.08319	.09853	0.00000
11.	SIM CORR	.75400	.82580	0.00000
12.	SLOPE W	21.59100	27.98800	0.00000
13.	SLOPE W2	15.44100	24.37800	0.00000
14.	SLOPE W3	15.23200	24.34700	0.00000
15.	EXP DIF	192.75000	581.11000	0.00000
16.	HICK GINI	.05895	.07825	0.00000
17.	MEAN W	12.42200	13.88400	0.00000
18.	STD DEV W	6.02800	5.83830	0.00000
19.	ELAST W	.29478	.39183	0.00000
20.	ELAST W2	.21082	.34129	0.00000
21.	ELAST W3	.20796	.34086	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Total local and state revenue excluding debt service and capital.
3. Wealth: Reported assessed valuation. (Equalized to 33.3% of market.)
4. Districts: All Unified districts.

TABLE B-52

STATE -- MO
YEAR -- 1975
DISTRICT TYPE -- UNIFIED

NUMBER OF DISTRICTS -- 454
NUMBER OF PUPILS -- 834,394
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1081.30000	1157.70000	0.00000
2. RANGE	2322.50000	2322.50000	0.00000
3. RES RANGE	496.15000	502.89000	0.00000
4. FED R R	.55691	.57304	0.00000
5. REL MN DEV	.11879	.12925	0.00000
6. PERM VAR	.87629	.93162	0.00000
7. VAR	38131.00000	44510.00000	0.00000
8. COEF VAR	.18059	.18223	0.00000
9. STD DEV LGS	.15100	.16282	0.00000
10. GINI	.08239	.09163	0.00000
11. SIM CORR	.73690	.80990	0.00000
12. SLOPE W	19.96800	24.93600	0.00000
13. SLOPE W2	14.95900	21.93500	0.00000
14. SLOPE W3	15.08400	21.68600	0.00000
15. EXP DIF	219.64000	298.48000	0.00000
16. HICK GINI	.05882	.07057	0.00000
17. MEAN W	15.31300	16.77100	0.00000
18. STD DEV W	7.20600	6.85230	0.00000
19. ELAST W	.28278	.36123	0.00000
20. ELAST W2	.21184	.31776	0.00000
21. ELAST W3	.21361	.31415	0.00000

Variable descriptions:

See Table B-51 (Missouri-Unified, 1974).

TABLE B-53

STATE -- 40

YEAR -- 1974

DISTRICT TYPE -- ELEMENTARY

NUMBER OF DISTRICTS -- 110

NUMBER OF PUPILS -- 24,671

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	682.94000	679.27000	0.00000
2. RANGE	1040.40000	1040.40000	0.00000
3. RES RANGE	274.93000	320.96000	0.00000
4. FED R R	.48470	.56585	0.00000
5. REL MN DEV	.13350	.12992	0.00000
6. PERM VAR	.93512	.92456	0.00000
7. VAR	19921.00000	19616.00000	0.00000
8. COEF VAR	.20141	.20619	0.00000
9. STD DEV LGS	.16900	.16987	0.00000
10. GINI	.09262	.09043	0.00000
11. SIM CORR	.56380	.69650	0.00000
12. SLOPE W	11.80700	14.84500	0.00000
13. SLOPE W2	9.02200	8.46600	0.00000
14. SLOPE W3	8.32100	7.53900	0.00000
15. EXP DIF	117.24000	123.49000	0.00000
16. HICK GINI	.05480	.06003	0.00000
17. MEAN W	11.16200	9.56270	0.00000
18. STD DEV W	6.56800	6.57140	0.00000
19. ELAST W	.19297	.20899	0.00000
20. ELAST W2	.14746	.11918	0.00000
21. ELAST W3	.13600	.10613	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Total local and state revenue excluding debt service and capital.
3. Wealth: Reported assessed valuation. (Equalized to 33.3% of market.)
4. Districts: All Elementary districts.

TABLE B-54

STATE -- MO	NUMBER OF DISTRICTS -- 105
YEAR -- 1975	NUMBER OF PUPILS -- 19,603
DISTRICT TYPE -- ELEMENTARY	NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	938.68000	938.91000	0.00000
2.	RANGE	1728.70000	1728.70000	0.00000
3.	RES RANGE	428.64000	464.15000	0.00000
4.	FED R R	.57187	.62356	0.00000
5.	REL MN DEV	.13439	.13424	0.00000
6.	PERM VAR	.92376	.90352	0.00000
7.	VAR	41890.00000	46410.00000	0.00000
8.	COEF VAR	.21804	.22962	0.00000
9.	STD DEV LGS	.17900	.18349	0.00000
10.	GINI	.09720	.09709	0.00000
11.	SIM CORR	.55640	.71640	0.00000
12.	SLOPE W	10.68600	12.69600	0.00000
13.	SLOPE W2	8.41200	9.14300	0.00000
14.	SLOPE W3	8.55500	9.18400	0.00000
15.	EXP DIF	182.36000	226.87000	0.00000
16.	HICK GINI	.05571	.06287	0.00000
17.	MEAN W	16.83800	14.79200	0.00000
18.	STD DEV W	10.65800	12.15500	0.00000
19.	ELAST W	.19168	.20017	0.00000
20.	ELAST W2	.15089	.14415	0.00000
21.	ELAST W3	.15346	.14480	0.00000

Variable descriptions:

See Table B-53 (Missouri-Elementary, 1974).

TABLE B-55

STATE -- N H
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 167
NUMBER OF PUPILS -- 174197
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1197.00000	1164.60000	0.00000
2.	RANGE	4001.90000	4001.90000	0.00000
3.	RES RANGE	783.15000	551.54000	0.00000
4.	FED R R	.91570	.60607	0.00000
5.	REL MN DEV	.18545	.13289	0.00000
6.	PERM VAR	.86303	.89467	0.00000
7.	VAR	146420.00000	65977.00000	0.00000
8.	COEF VAR	.31968	.22056	0.00000
9.	STD DEV LGS	.58530	.54970	0.00000
10.	GINI	.13400	.09500	0.00000
11.	SIM CORR	.62360	.52550	0.00000
12.	SLOPE W	2.23430	3.54850	0.00000
13.	SLOPE W2	2.50450	4.87250	0.00000
14.	SLOPE W3	3.52990	5.59100	0.00000
15.	EXP DIF	754.34000	423.18000	0.00000
16.	HICK GINI	.09600	.07200	0.00000
17.	MEAN W	96.33400	65.04600	0.00000
18.	STD DEV W	106.86000	37.84500	0.00000
19.	ELAST W	.17982	.19819	0.00000
20.	ELAST W2	.20156	.27214	0.00000
21.	ELAST W3	.28408	.31227	0.00000

Variable descriptions:

1. Pupils (unweighted): Total number of pupils in Average Daily Membership in residence.

2. Revenues: The sum of locally raised revenues, and all state aid paid excluding school building aid, area vocational school aid and "other revenue from state sources" (primarily construction aid for area vocational schools).

3. Wealth: Equalized Property Valuation for 1974.

4. Districts: Includes all single town districts and cooperative school districts in the state.

TABLE B-56

STATE -- N J
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 578
NUMBER OF PUPILS --1449180
NUMBER OF WEIGHTED PUPILS --1762596

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1412.40000	1400.50000	1151.50000
2.	RANGE	4667.00000	4667.00000	3907.90000
3.	RES RANGE	1021.90000	819.02000	784.92000
4.	FED P P	1.04470	.78060	.97128
5.	REL MN DEV	.17750	.14621	.16612
6.	PERM VAR	.85402	.87382	.87086
7.	VAR	126390.00000	70485.00000	60054.00000
8.	COEF VAR	.25135	.18957	.21281
9.	STD DEV LGS	.35420	.28650	.50110
10.	GINI	.12700	.10400	.11700
11.	SIM CORR	.40580	.38960	.59910
12.	SLOPE W	2.18170	3.08190	4.83370
13.	SLOPE W2	3.97200	3.87150	6.23000
14.	SLOPE W3	4.28010	3.88150	6.47140
15.	EXP DIF	566.02000	260.52000	393.11000
16.	HICK GINI	.06700	0.00000	.08200
17.	MEAN W	76.60400	60.47000	49.72200
18.	STD DEV W	66.12300	33.56000	30.37300
19.	ELAST W	.11833	.13307	.20872
20.	ELAST W2	.21543	.16716	.26901
21.	ELAST W3	.23214	.16759	.27944

Variable descriptions:

1. a. Pupils (unweighted): The number of children who reside in the school district and are enrolled on September 30 in public schools either in their own district or in a district to which the school board pays tuition. This count does not include students sent to county vocational schools.

   b. Pupils (weighted): The sum of unweighted pupils plus .75 for each AFDC student.

2. Revenues: Sum of locally-raised revenues for operating expenditures and state aid for operating expenditures. Locally-raised revenues for capital and debt expenditures are excluded.

3. Wealth: Annual Equalized Property Valuation.

4. Districts: Includes all districts with resident pupils but excludes county vocational school districts, county special services district, and three school districts with extraordinarily high property wealth and negligible student counts (Teterboro, Rockleigh, and Stone Harbor Boro).

TABLE B-57

STATE -- N J
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 575
NUMBER OF PUPILS -- 1433045
NUMBER OF WEIGHTED PUPILS -- 1509071

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1514.50000	1511.20000	1435.10000
2. RANGE	2706.10000	2706.10000	2537.70000
3. RES RANGE	1057.90000	939.78000	935.44000
4. FED R R	1.00830	.84529	.91624
5. REL MN DEV	.17323	.14836	.15494
6. PERM VAR	.85449	.87063	.87776
7. VAR	113240.00000	83123.00000	77741.00000
8. COEF VAR	.22219	.19078	.19429
9. STD DEV LGS	.27050	.23190	.27460
10. GINI	.12100	.10300	.10500
11. SIM CORR	.37040	.41420	.46310
12. SLOPE W	1.63690	3.14490	3.50870
13. SLOPE W2	3.50760	4.12890	4.58030
14. SLOPE W3	4.09720	4.18380	4.63260
15. EXP DIF	623.91000	317.71000	349.79000
16. HICK GINI	.06300	.05000	.05800
17. MEAN W	85.90000	66.85300	63.48500
18. STD DEV W	76.13900	37.97000	36.80100
19. ELAST W	.09284	.13913	.15522
20. ELAST W2	.19895	.18266	.20262
21. ELAST W3	.23239	.18508	.20493

Variable descriptions:

1. a. Pupils (unweighted): See Table B-56 (New Jersey, 1974).

   b. Pupils (weighted): Unweighted pupils plus weighted pupils as per weightings described on following page (from Sec. 18A: TA-20 of the Public School Education Act of 1975).

2. Revenues: See Table B-56 (New Jersey, 1974).

3. Wealth: See Table B-56 (New Jersey, 1974).

4. Districts: See Table B-56 (New Jersey, 1974).

New Jersey Weightings for Categorical Aid Programs as contained in the Public School Education Act of 1975 (N.J.S.A. 18A:7A-20)

Special Education Classes	Additional Cost Factors
Educable	0.53
Trainable	0.95
Orthopedically handicapped	1.27
Neurologically impaired	1.06
Perceptually impaired	0.85
Visually handicapped	1.91
Auditorially handicapped	1.38
Communication handicapped	1.06
Emotionally disturbed	1.27
Socially maladjusted	0.95
Chronically ill	0.85
Multiply handicapped	1.27
Other Classes and Services	
Approved private school tuition	Additional cost factor of the handicap plus 1.0
Supplementary and speech instruction	0.09 based on the number of pupils actually receiving such instruction in the prior school year
Bilingual education	0.16
State compensatory education	0.11
Home instruction	0.006 times the number of hours of instruction actually provided in the prior school year

TABLE B-58

STATE -- N J
YEAR -- 1976
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 576
NUMBER OF PUPILS -- 1401146
NUMBER OF WEIGHTED PUPILS -- 1492660

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1703.90000	1567.70000	1565.40000
2.	RANGE	5056.30000	5056.30000	5057.40000
3.	RES RANGE	1058.00000	1007.10000	972.87000
4.	FED P R	.85843	.82836	.84808
5.	REL MN DEV	.15473	.13120	.13803
6.	PERM VAR	.85808	.89139	.88568
7.	VAR	139790.00000	80367.00000	76016.00000
8.	COEF VAR	.21943	.16999	.17613
9.	STD DEV LGS	.13160	.10490	.18530
10.	GINI	.11000	.09300	.09700
11.	SIM CORR	.32060	.46250	.50970
12.	SLOPE W	1.34110	3.10550	3.47500
13.	SLOPE W2	2.77900	4.12060	4.62010
14.	SLOPE W3	3.19430	4.27800	4.86070
15.	EXP DIF	571.05000	361.25000	393.15000
16.	HICK GINI	.04900	.05100	.06000
17.	MEAN W	94.93100	72.68600	68.23000
18.	STD DEV W	89.38500	42.22200	40.44200
19.	ELAST W	.07472	.13535	.15146
20.	ELAST W2	.15483	.17959	.20137
21.	ELAST W3	.17797	.18645	.21186

Variable descriptions:

1. a. Pupils (unweighted): See Table B-56 (New Jersey, 1974).
   b. Pupils (weighted): See Table B-57 (New Jersey, 1975).
2. Revenues: See Table B-56 (New Jersey, 1974).
3. Wealth: See Table B-56 (New Jersey, 1974).
4. Districts: See Table B-56 (New Jersey, 1974).

TABLE B-59

STATE -- N J
YEAR -- 1977
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 575
NUMBER OF PUPILS -- 1359189
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1872.00000	1823.70000	0.00000
2. RANGE	5553.00000	5853.00000	0.00000
3. RES RANGE	1209.80000	1057.60000	0.00000
4. FED R R	.89805	.78799	0.00000
5. REL MN DEV	.15247	.13678	0.00000
6. PERM VAR	.86714	.87823	0.00000
7. VAR	171600.00000	117940.00000	0.00000
8. COEF VAR	.22129	.18831	0.00000
9. STD DEV LGS	.17190	.16720	0.00000
10. GINI	.11100	.09900	0.00000
11. SIM CORR	.38670	.42950	0.00000
12. SLOPE W	1.63790	3.12820	0.00000
13. SLOPE W2	3.45280	4.07220	0.00000
14. SLOPE W3	3.81790	4.14760	0.00000
15. EXP DIF	746.75000	891.08000	0.00000
16. HICK GINI	.05500	.04900	0.00000
17. MEAN W	104.51000	79.26600	0.00000
18. STD DEV W	97.79700	47.14500	0.00000
19. ELAST W	.09144	.13597	0.00000
20. ELAST W2	.19276	.17700	0.00000
21. ELAST W3	.21315	.18027	0.00000

Variable descriptions:

1. Pupils (unweighted) See Table B-56 (New Jersey, 1974).
2. Revenues: See Table B-56 (New Jersey, 1974).
3. Wealth: See Table B-56 (New Jersey, 1974).
4. Districts: See Table B-56 (New Jersey, 1974).

TABLE B-60

STATE -- N M

YEAR -- 1972

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88

NUMBER OF PUPILS -- 276155

NUMBER OF WEIGHTED PUPILS --

			UNIT OF ANALYSIS	
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	948.09000	781.38000	0.00000
2.	RANGE	968.66000	968.66000	0.00000
3.	RES RANGE	684.85000	286.48000	0.00000
4.	FED R R	.96620	.41070	0.00000
5.	REL MN DEV	.19507	.10599	0.00000
6.	PERM VAR	.88711	.99522	0.00000
7.	VAR	54820.00000	14208.00000	0.00000
8.	COEF VAR	.24696	.15255	0.00000
9.	STD DEV LGS	.22500	.13200	0.00000
10.	GINI	.13035	.06804	0.00000
11.	SIM CORR	.49993	.48140	0.00000
12.	SLOPE W	2.07610	1.78890	0.00000
13.	SLOPE W2	2.81300	1.36960	0.00000
14.	SLOPE W3	2.93590	.06527	0.00000
15.	EXP DIF	345.31000	56.80400	0.00000
16.	HICK GINI	0.00000	.00046	0.00000
17.	MEAN W	68.31800	46.36000	0.00000
18.	STD DEV W	56.38300	52.07600	0.00000
19.	ELAST W	.14960	.10614	0.00000
20.	ELAST W2	.20270	.08126	0.00000
21.	ELAST W3	.21156	.00387	0.00000

Variable descriptions:

1. Pupils (unweighted): Average Daily Membership (ADM).
2. Revenues: Local and state revenues plus Federal impact aid (PL 874 revenue).
3. Wealth: Equalized Assessed Value
4. Districts: All

TABLE B-61

STATE -- N M

YEAR -- 1973

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88

NUMBER OF PUPILS -- 273743

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1067.80000	859.60000	0.00000
2.	RANGE	2761.80000	2761.80000	0.00000
3.	RES RANGE	979.60000	365.61000	0.00000
4.	FED R R	1.27440	.49730	0.00000
5.	REL MN DEV	.23768	.10974	0.00000
6.	PERM VAR	.86849	.97606	0.00000
7.	VAR	147930.00000	22733.00000	0.00000
8.	COEF VAR	.36021	.17958	0.00000
9.	STD DEV LGS	.27700	.14000	0.00000
10.	GINI	.16048	.06968	0.00000
11.	SIM CORR	.32739	.36344	0.00000
12.	SLOPE W	1.95010	1.51110	0.00000
13.	SLOPE W2	2.84730	.71979	0.00000
14.	SLOPE W3	2.98130	-.11484	0.00000
15.	EXP DIF	407.22000	-15.80400	0.00000
16.	WICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	76.21200	51.26800	0.00000
18.	STD DEV W	64.57400	56.26300	0.00000
19.	ELAST W	.13918	.09227	0.00000
20.	ELAST W2	.20322	.04395	0.00000
21.	ELAST W3	.21278	-.00701	0.00000

Variable descriptions:

See Table B-60 (New Mexico, 1972).

TABLE B-62

STATE -- N M
NUMBER OF DISTRICTS -- 88
YEAR -- 1974
NUMBER OF PUPILS -- 273063
DISTRICT TYPE -- 1
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	1230.00000	947.99000	0.00000
2. RANGE	1922.10000	1922.10000	0.00000
3. RES RANGE	1205.30000	356.38000	0.00000
4. FED R R	1.42490	.42930	0.00000
5. REL MN DEV	.25744	.09324	0.00000
6. PERM VAR	.87254	.94382	0.00000
7. VAR	160760.00000	25491.00000	0.00000
8. COEF VAR	.32599	.16842	0.00000
9. STD DEV LGS	.28900	.13300	0.00000
10. GINI	.16842	.06447	0.00000
11. SIM CORR	.34503	.49183	0.00000
12. SLOPE W	1.73250	1.67990	0.00000
13. SLOPE W2	2.78940	1.46720	0.00000
14. SLOPE W3	3.07780	1.06230	0.00000
15. EXP DIF	538.77000	95.46200	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	86.95700	57.30900	0.00000
18. STD DEV W	79.85200	46.74400	0.00000
19. ELAST W	.12248	.10156	0.00000
20. ELAST W2	.19720	.08870	0.00000
21. ELAST W3	.21759	.06422	0.00000

Variable descriptions:

See Table B-60 (New Mexico, 1972).

TABLE B-63

STATE -- N M
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 88
NUMBER OF PUPILS -- 265374
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1338.40000	1069.50000	0.00000
2.	RANGE	1554.80000	1554.80000	0.00000
3.	RES RANGE	1094.40000	353.12000	0.00000
4.	FED R R	1.10420	.37230	0.00000
5.	REL MN DEV	.22618	.07592	0.00000
6.	PERM VAR	.90886	.96132	0.00000
7.	VAR	134270.00000	21467.00000	0.00000
8.	COEF VAR	.27378	.13699	0.00000
9.	STD DEV LGS	.25100	.11300	0.00000
10.	GINI	.14511	.05236	0.00000
11.	SIM CORR	.26419	.37259	0.00000
12.	SLOPE W	1.08010	1.02680	0.00000
13.	SLOPE W2	1.88680	.77756	0.00000
14.	SLOPE W3	2.34430	.54014	0.00000
15.	EXP DIF	469.35000	57.43300	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	94.91600	64.11600	0.00000
18.	STD DEV W	89.62400	53.16500	0.00000
19.	ELAST W	.07660	.06156	0.00000
20.	ELAST W2	.13381	.04661	0.00000
21.	ELAST W3	.16625	.03238	0.00000

Variable descriptions:

See Table B-60 (New Mexico, 1972).

TABLE B-64

STATE -- N Y
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 705
NUMBER OF PUPILS -- 3009812
NUMBER OF WEIGHTED PUPILS -- 3209582

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	2065.00000	2179.80000	2044.20000
2. RANGE	7233.90000	7233.90000	6922.90000
3. RES RANGE	2274.10000	1591.20000	1543.70000
4. FED R R	1.56190	1.03770	1.05350
5. REL MN DEV	.25730	.17688	.16138
6. PERM VAR	.90485	.81589	.80840
7. VAR	645450.00000	282470.00000	250700.00000
8. COEF VAR	.38906	.24382	.24494
9. STD DEV LGS	.30560	.23400	.22230
10. GINI	.17100	.12200	.11300
11. SIM CORR	.80650	.79020	.76820
12. SLOPE W	9.36830	14.29000	14.09400
13. SLOPE W2	13.99900	15.49900	15.30400
14. SLOPE W3	15.24500	15.49600	15.19900
15. EXP DIF	2108.90000	810.86000	829.58000
16. HICK GINI	.14900	.10400	.09500
17. MEAN W	60.08000	60.97300	57.17800
18. STD DEV W	69.16700	29.39000	27.29100
19. ELAST W	.27257	.39972	.39422
20. ELAST W2	.40729	.43354	.42807
21. ELAST W3	.44354	.43345	.42513

Variable descriptions:

1. a. Pupils (unweighted): The sum of pupils in Average Daily Attendance for grades 1-12 plus 1/2 the pupils in kindergarten. This is a district count.

   b. Pupils (weighted): The total aidable Pupil Units (TAPU) in the state which is made up of 13 separate categories of students. Weightings are applied for special education needs (students scoring low on the state proficiency exam), full day kindergarten and grades 1-6, grades 7-12, 1/2 day kindergarten, summer school, and evening school. Pupils in classes for the severely handicapped are excluded; students in occupational classes receive only their secondary weight.

2. Revenues: The sum of total local levied, total operating aid paid, transportation aid, reorganization incentive aid, severely handicapped aid (to the Big 5) and occupational education aid (to the Big 5).

3. Wealth: Full Value of Taxable Real Property for 1974 (as equalized by the state).

4. Districts: Only school districts having at least 8 professional staff or more are included in the analyses. These are the major school districts typically employed in analyses prepared by the New York State Education Department. Corning has been omitted because the state data tapes contained erroneous information.

TABLE B-65

STATE -- N C
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 133
NUMBER OF PUPILS -- 1040725
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1. MEAN EXP	629.00000	639.00000	0.00000
2. RANGE	300.00000	300.00000	0.00000
3. RES RANGE	201.00000	274.00000	0.00000
4. FED R R	.36873	.51269	0.00000
5. REL MN DEV	.07103	.09271	0.00000
6. PERM VAR	.92112	.93279	0.00000
7. VAR	3377.00000	5872.00000	0.00000
8. COEF VAR	.09237	.11987	0.00000
9. STD DEV LGS	.08996	.11575	0.00000
10. GINI	.05076	.06552	0.00000
11. SIM CORR	.54948	.75750	0.00000
12. SLOPE W	3.12130	5.02520	0.00000
13. SLOPE W2	2.45230	4.22890	0.00000
14. SLOPE W3	1.60200	3.76650	0.00000
15. EXP DIF	0.00000	0.00000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	32.69600	36.28400	0.00000
18. STD DEV W	10.26900	10.26100	0.00000
19. ELAST W	.16225	.28534	0.00000
20. ELAST W2	.12747	.24013	0.00000
21. ELAST W3	.08327	.21387	0.00000

Variable descriptions:

1. Pupils (unweighted): Average Daily Membership
2. Revenues: Operating revenues from state and local sources.
3. Wealth: Equalized assessed value
4. Districts: All.

TABLE B-66

STATE -- N C
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 146
NUMBER OF PUPILS -- 1151500
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	884.00000	900.00000	0.00000
2. RANGE	444.00000	444.00000	0.00000
3. RES RANGE	251.00000	340.00000	0.00000
4. FED R R	.32241	.42951	0.00000
5. REL MN DEV	.06779	.08570	0.00000
6. PERM VAR	.93270	.95092	0.00000
7. VAR	6185.00000	9383.00000	0.00000
8. COEF VAR	.08897	.10758	0.00000
9. STD DEV LGS	.08838	.10298	0.00000
10. GINI	.04846	.05792	0.00000
11. SIM CORR	.27173	.44016	0.00000
12. SLOPE W	.50004	1.08430	0.00000
13. SLOPE W2	.86756	1.69140	0.00000
14. SLOPE W3	.85692	1.67580	0.00000
15. EXP DIF	0.00000	0.00000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	81.59300	86.17400	0.00000
18. STD DEV W	42.88400	57.78700	0.00000
19. ELAST W	.04615	.10582	0.00000
20. ELAST W2	.08008	.16195	0.00000
21. ELAST W3	.07909	.16046	0.00000

Variable descriptions:

See Table B-65 (North Carolina, 1972).

TABLE B-67

STATE -- ORE
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 296
NUMBER OF PUPILS -- 443,994
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1657.50000	1521.60000	0.00000
2.	RANGE	6091.00000	6091.00000	0.00000
3.	RES RANGE	1975.00000	856.00000	0.00000
4.	FED R R	2.18980	.79847	0.00000
5.	REL MN DEV	.30114	.14320	0.00000
6.	PERM VAR	.83523	.80510	0.00000
7.	VAR	579260.00000	87203.00000	0.00000
8.	COEF VAR	.45917	.19407	0.00000
9.	STD DEV LGS	.37200	.19755	0.00000
10.	GINI	.21543	.10256	0.00000
11.	SIM CORR	.70880	.70170	0.00000
12.	SLOPE W	7.67400	7.27300	0.00000
13.	SLOPE W2	10.68700	8.67000	0.00000
14.	SLOPE W3	10.73300	7.65900	0.00000
15.	EXP DIF	1509.00000	466.43000	0.00000
16.	HICK GINI	.17802	.10256	0.00000
17.	MEAN W	93.30900	69.78700	0.00000
18.	STD DEV W	70.29200	28.49100	0.00000
19.	ELAST W	.43201	.33357	0.00000
20.	ELAST W2	.60162	.39764	0.00000
21.	ELAST W3	.60421	.35127	0.00000

Variable descriptions:

1. Pupil (unweighted): Resident Average Daily Membership.
2. Revenues: Local revenues and state equalization and flat grant aid excluding debt service and capital.
3. Wealth: Assessed property valuation equalized to 100% of market value.
4. Districts: All

TABLE B-68

STATE -- S C
YEAR -- 1972
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 92
NUMBER OF PUPILS --641989
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	491.00000	507.00000	0.00000
2. RANGE	372.00000	372.00000	0.00000
3. RES RANGE	268.00000	296.00000	0.00000
4. FED R R	.74071	.80706	0.00000
5. REL MN DEV	.11560	.11678	0.00000
6. PERM VAR	.85848	.90450	0.00000
7. VAR	5416.00000	6003.00000	0.00000
8. COEF VAR	.14980	.15284	0.00000
9. STD DEV LOG	.14813	.15266	0.00000
10. GINI	.08304	.08474	0.00000
11. SIM CORR	.63060	.75655	0.00000
12. SLOPE W	45.70100	80.15700	0.00000
13. SLOPE W2	61.36600	91.57900	0.00000
14. SLOPE W3	60.96400	93.06900	0.00000
15. EXP DIF	0.00000	0.00000	0.00000
16. HICK GINI	0.00000	0.00000	0.00000
17. MEAN W	2.25700	2.37900	0.00000
18. STD DEV W	1.02100	.87900	0.00000
19. ELAST W	.21008	.37612	0.00000
20. ELAST W2	.28208	.42972	0.00000
21. ELAST W3	.28024	.43671	0.00000

Variable descriptions:

1. Pupils (unweighted): 35 day enrollment.
2. Revenues: Local and State Revenues: Local revenues include: current property taxes, delinquent taxes. other taxes, appropriations, and other local receipts. State revenues include all revenues except: vocational education -- construction and equipment, and the state school building fund.
3. Wealth: Assessed property valuation. (Equalized values not available).
4. Districts: All

TABLE B-69

STATE -- S C
YEAR -- 1973
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS --92
NUMBER OF PUPILS -- 618839
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN E P	794.00000	805.00000	0.00000
2.	RANGE	1137.00000	1137.00000	0.00000
3.	RES RANGE	610.00000	604.00000	0.00000
4.	FED R R	1.06440	1.04910	0.00000
5.	REL MN DEV	.17374	.15990	0.00000
6.	PERM VAR	.83029	.86841	0.00000
7.	VAR	35864.00000	28259.00000	0.00000
8.	COEF VAR	.23848	.20878	0.00000
9.	STD DEV LGS	.21996	.19943	0.00000
10.	GINI	.12021	.11322	0.00000
11.	SIM CORR	.38614	.55199	0.00000
12.	SLOPE W	70.51200	96.30500	0.00000
13.	SLOPE W2	98.43700	110.06000	0.00000
14.	SLOPE W3	101.72000	111.01000	0.00000
15.	EXP DIF	0.00000	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	2.75300	3.04800	0.00000
18.	STD DEV W	1.04300	1.08400	0.00000
19.	ELAST W	.24448	.36464	0.00000
20.	ELAST W2	.34131	.41672	0.00000
21.	ELAST W3	.35269	.42032	0.00000

Variable descriptions:

See Table B-68 (South Carolina 1972).

TABLE B-70

STATE -- S D
YEAR -- 1973
DISTRICT TYPE -- J

NUMBER OF DISTRICTS -- 195
NUMBER OF PUPILS -- 157,633
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	878.30000	765.96000	0.00000
2.	RANGE	1934.90000	1934.90000	0.00000
3.	RES RANGE	581.47000	406.22000	0.00000
4.	FED R R	.90083	.67114	0.00000
5.	REL MN DEV	.16687	.12899	0.00000
6.	PERM VAR	.90123	.86903	0.00000
7.	VAR	46568.00000	22750.00000	0.00000
8.	COEF VAR	.24570	.19692	0.00000
9.	STD DEV LGS	.23500	.21307	0.00000
10.	GINI	.12225	.09643	0.00000
11.	SIM CORR	.84080	.81530	0.00000
12.	SLOPE W	13.03500	12.99600	0.00000
13.	SLOPE W2	15.33300	14.48100	0.00000
14.	SLOPE W3	14.59600	14.16500	0.00000
15.	EXP DIF	411.75000	371.44000	0.00000
16.	HICK GINI	.09787	.08063	0.00000
17.	MEAN W	27.52700	20.73500	0.00000
18.	STD DEV W	13.92000	9.46190	0.00000
19.	ELAST W	.41447	.35181	0.00000
20.	ELAST W2	.43984	.39201	0.00000
21.	ELAST W3	.46410	.38346	0.00000

Variable descriptions:

1. Pupils (unweighted): Average Daily Membership (ADM).
2. Revenues: Total state and lcoal revenues excluding debt service and capital.
3. Wealth: Total equalized assessed valuation, including agricultural and non-agricultural property.
4. Districts: All

TABLE B-71

STATE -- S D

YEAR -- 1974

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 195

NUMBER OF PUPILS -- 154,354

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	969.69000	854.55000	0.00000
2. RANGE	1612.60000	1612.60000	0.00000
3. RES RANGE	707.67000	441.32000	0.00000
4. FED R R	.59780	.54959	0.00000
5. REL MN DEV	.16676	.12724	0.00000
6. PERM VAR	.69188	.87509	0.00000
7. VAR	53973.00000	29106.00000	0.00000
8. COEF VAR	.23958	.19964	0.00000
9. STD DEV LGS	.23200	.21408	0.00000
10. GINI	.12177	.09810	0.00000
11. SIM CORR	.81140	.79670	0.00000
12. SLOPE W	13.21800	12.40800	0.00000
13. SLOPE W2	13.59700	13.74000	0.00000
14. SLOPE W3	13.17500	13.42300	0.00000
15. EXP DIF	387.38000	307.18000	0.00000
16. HICK GINI	.09631	.09172	0.00000
17. MEAN W	30.38900	21.92600	0.00000
18. STD DEV W	14.26100	10.95300	0.00000
19. ELAST W	.41424	.31436	0.00000
20. ELAST W2	.42611	.33254	0.00000
21. ELAST W3	.41289	.34441	0.00000

Variable descriptions:

See Table B-70 (South Dakota, 1973).

TABLE B-72

STATE -- S D
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 195
NUMBER OF PUPILS -- 151,370
NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1. MEAN EXP	1081.50000	967.93000	0.00000
2. RANGE	1695.20000	1695.20000	0.00000
3. RES RANGE	709.56000	584.73000	0.00000
4. FED R R	.88459	.87952	0.00000
5. REL MN DEV	.15883	.11365	0.00000
6. PERM VAR	.88420	.87444	0.00000
7. VAR	58148.00000	29894.00000	0.00000
8. COEF VAR	.22298	.17863	0.00000
9. STD DEV LGS	.21600	.19087	0.00000
10. GINI	.11552	.09762	0.00000
11. SIM CORR	.79490	.75930	0.00000
12. SLOPE W	12.68300	11.68600	0.00000
13. SLOPE W2	12.92700	12.61900	0.00000
14. SLOPE W3	11.33600	12.15800	0.00000
15. EXP DIF	349.55000	284.53000	0.00000
16. HICK GINI	.08707	.06753	0.00000
17. MEAN W	32.62800	24.11800	0.00000
18. STD DEV W	15.11300	11.23500	0.00000
19. ELAST W	.39264	.29118	0.00000
20. ELAST W2	.39000	.31443	0.00000
21. ELAST W3	.34200	.30294	0.00000

Variable descriptions:

See Table B-70 (South Dakota, 1973).

TABLE B-73

STATE -- TEXAS
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 1090
NUMBER OF PUPILS -- 2531541
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1255.40000	1029.50000	0.00000
2.	RANGE	25164.00000	25164.00000	0.00000
3.	RES RANGE	1530.50000	750.58000	0.00000
4.	FED R R	2.17390	1.11200	0.00000
5.	REL MN DEV	.34930	.16089	0.00000
6.	PERM VAR	.82835	.83930	0.00000
7.	VAR	1245400.00000	63494.00000	0.00000
8.	COEF VAR	.88896	.24476	0.00000
9.	STD DEV LGS	.39200	.22600	0.00000
10.	GINI	.24476	.12099	0.00000
11.	SIM CORR	.72107	.60420	0.00000
12.	SLOPE W	.87748	1.48970	0.00000
13.	SLOPE W2	1.40560	1.74540	0.00000
14.	SLOPE W3	.81491	2.05500	0.00000
15.	EXP DIF	1478.80000	418.82000	0.00000
16.	HICK GINI	.00510	.01880	0.00000
17.	MEAN W	275.07000	93.41400	0.00000
18.	STD DEV W	916.82000	101.89000	0.00000
19.	ELAST W	.19226	.13517	0.00000
20.	ELAST W2	.30798	.15837	0.00000
21.	ELAST W3	.17855	.18647	0.00000

Variable descriptions:

1. Pupil (unweighted): Average Daily Attendance (ADA).
2. Revenues: Local and state revenues.
3. Wealth: Governor's Office equalized value in 1975 divided by 1975 ADA.
4. Districts: All.

TABLE B-74

STATE -- TEXAS
YEAR -- 1975
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 1090
NUMBER OF PUPILS -- 2536472
NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	1510.40000	1232.30000	0.00000
2.	RANGE	67188.00000	67188.00000	0.00000
3.	RES RANGE	1747.10000	776.15000	0.00000
4.	FED R R	1.97270	.88760	0.00000
5.	REL MN DEV	.35552	.14028	0.00000
6.	PERM VAR	.84949	.88372	0.00000
7.	VAR	4681800.00000	74544.00000	0.00000
8.	COEF VAR	1.43260	.22451	0.00000
9.	STD DEV LGS	.37700	.18900	0.00000
10.	GINI	.24616	.10395	0.00000
11.	SIM CORR	.66848	.62227	0.00000
12.	SLOPE W	1.57760	1.72000	0.00000
13.	SLOPE W2	1.06900	1.85100	0.00000
14.	SLOPE W3	.79846	2.28780	0.00000
15.	EXP DIF	1464.10000	455.86000	0.00000
16.	HICK GINI	.00049	.01883	0.00000
17.	MEAN W	275.07000	93.52700	0.00000
18.	STD DEV W	916.82000	99.61300	0.00000
19.	ELAST W	.28731	.13054	0.00000
20.	ELAST W2	.19468	.14048	0.00000
21.	ELAST W3	.14541	.17364	0.00000

Variable descriptions:

See Table B-73 (Texas, 1974).

TABLE B-75

STATE -- VERMT NUMBER OF DISTRICTS -- 246

YEAR -- 1975 NUMBER OF PUPILS -- 108759

DISTRICT TYPE -- 1 NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1202.50000	1223.20000	0.00000
2.	RANGE	2359.20000	2359.20000	0.00000
3.	RES RANGE	768.93000	632.77000	0.00000
4.	FED R R	.90061	.69889	0.00000
5.	REL MN DEV	.16004	.12508	0.00000
6.	PERM VAR	.86131	.88027	0.00000
7.	VAR	70735.00000	44859.00000	0.00000
8.	COEF VAR	.22117	.17316	0.00000
9.	STD DEV LGS	.48280	.43370	0.00000
10.	GINI	.11400	.09100	0.00000
11.	SIM CORR	.48600	.48870	0.00000
12.	SLOPE W	1.07160	1.96500	0.00000
13.	SLOPE W2	1.64020	2.54000	0.00000
14.	SLOPE W3	1.82240	2.47940	0.00000
15.	EXP DIF	439.60000	261.24000	0.00000
16.	HICK GINI	.05100	.02600	0.00000
17.	MEAN W	104.92000	66.38700	0.00000
18.	STD DEV W	120.61000	52.68100	0.00000
19.	ELAST W	.09350	.10665	0.00000
20.	ELAST W2	.14311	.13785	0.00000
21.	ELAST W3	.15901	.13457	0.00000

Variable descriptions:

1. Pupils (unweighted): The sum of elementary and secondary pupils in Average Daily Membership in residence within a school district, whose education is paid for by public funds, averaged over the first 30 days of the school year.

2. Revenues: The sum of local yield and all state aid excluding building aid.

3. Wealth: 100% of Fair Market Value for 1974 as equalized by the state.

4. Districts: Includes all 246 non-union school districts--those with resident pupils and which are eligible for state aid.

TABLE B-76

STATE -- WASH

YEAR -- 1970

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 294

NUMBER OF PUPILS -- 776,125

NUMBER OF WEIGHTED PUPILS --

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	UNIT OF ANALYSIS DISTRICT	 UNWEIGHTED PUPIL	 WEIGHTED PUPIL
1.	MEAN EXP	813.79000	792.18000	0.00000
2.	RANGE	4549.50000	4549.50000	0.00000
3.	RES RANGE	780.44000	492.04000	0.00000
4.	FED R R	1.45120	.81917	0.00000
5.	REL MN DEV	.25257	.15951	0.00000
6.	PERM VAR	.87559	.86368	0.00000
7.	VAR	131650.00000	23819.00000	0.00000
8.	COEF VAR	.44620	.19482	0.00000
9.	STD DEV LGS	.31000	.19203	0.00000
10.	GINI	.17821	.10664	0.00000
11.	SIM CORR	.70000	.54510	0.00000
12.	SLOPE W	1.92600	2.20000	0.00000
13.	SLOPE W2	1.45500	2.75300	0.00000
14.	SLOPE W3	1.75700	3.12900	0.00000
15.	EXP DIF	463.57000	239.29000	0.00000
16.	HICK GINI	.11838	.06369	0.00000
17.	MEAN W	110.43000	58.38800	0.00000
18.	STD DEV W	131.95000	38.24200	0.00000
19.	ELAST W	.26136	.16215	0.00000
20.	ELAST W2	.19744	.20291	0.00000
21.	ELAST W3	.23842	.23062	0.00000

Variable descriptions:

1. Pupil (unweighted); Enrollment.
2. Revenues: Local and state revenue excluding debt service and capital.
3. Wealth: State adjusted value of local property. (Adjusted to 100% of market value.)
4. Districts: All districts except three with extraordinarily high assessed value per pupil.

TABLE B-77

STATE -- WASH
YEAR -- 1974
DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 294
NUMBER OF PUPILS -- 745,312
NUMBER OF WEIGHTED PUPILS --

		UNIT OF ANALYSIS		
	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1143.30000	1087.70000	0.00000
2.	RANGE	5606.80000	5606.80000	0.00000
3.	RES RANGE	1303.20000	791.74000	0.00000
4.	FED R R	1.97020	1.10110	0.00000
5.	REL MN DEV	.27667	.15866	0.00000
6.	PERM VAR	.84519	.81532	0.00000
7.	VAR	294610.00000	51640.00000	0.00000
8.	COEF VAR	.47474	.20892	0.00000
9.	STD DEV LGS	.35600	.21428	0.00000
10.	GINI	.20029	.11515	0.00000
11.	SIM CORR	.60610	.52530	0.00000
12.	SLOPE W	2.15600	3.46600	0.00000
13.	SLOPE W2	4.27600	4.06700	0.00000
14.	SLOPE W3	3.36800	4.75900	0.00000
15.	EXP DIF	1027.80000	327.75000	0.00000
16.	HICK GINI	.13708	.06755	0.00000
17.	MEAN W	112.51000	62.49100	0.00000
18.	STD DEV W	152.58000	34.43400	0.00000
19.	ELAST W	.21217	.19913	0.00000
20.	ELAST W2	.42079	.23366	0.00000
21.	ELAST W3	.33144	.27342	0.00000

Variable descriptions:

See Table B-76 (Washington, 1970).

TABLE B-78

STATE -- W VA

YEAR -- 1975

DISTRICT TYPE -- 1

NUMBER OF DISTRICTS -- 55

NUMBER OF PUPILS -- 366398

NUMBER OF WEIGHTED PUPILS --

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY		UNIT OF ANALYSIS		
		DISTRICT	UNWEIGHTED PUPIL	WEIGHTED PUPIL
1.	MEAN EXP	1039.00000	1038.00000	0.00000
2.	RANGE	811.00000	811.00000	0.00000
3.	RES RANGE	373.00000	313.00000	0.00000
4.	FED R R	.44030	.35620	0.00000
5.	REL MN DEV	.09123	.08492	0.00000
6.	PERM VAR	.88862	.95063	0.00000
7.	VAR	16789.00000	11417.00000	0.00000
8.	COEF VAR	.12466	.10293	0.00000
9.	STD DEV LGS	.11501	.09977	0.00000
10.	GINI	.06290	.05520	0.00000
11.	SIM CORR	.47460	.48610	0.00000
12.	SLOPE W	3.05300	2.98200	0.00000
13.	SLOPE W2	3.19820	3.08940	0.00000
14.	SLOPE W3	3.86700	3.72100	0.00000
15.	EXP DIF	157.22000	155.11000	0.00000
16.	HICK GINI	0.00000	0.00000	0.00000
17.	MEAN W	54.62600	57.93700	0.00000
18.	STD DEV W	20.14300	23.39800	0.00000
19.	ELAST W	.16051	.16644	0.00000
20.	ELAST W2	.16815	.17244	0.00000
21.	ELAST W3	.20331	.20769	0.00000

Variable descriptions:

1. Pupils: Average Daily Attendance (ADA).
2. Revenues: Local and state revenues excluding debt service and capital.
3. Wealth: Equalized Assessed Valuation.
4. Districts: All.

Appendix C

For states where data are available for more than one year, all years reported for each state are presented in the Tables in Appendix C, organized by state and unit of analysis. These tables are used to analyze the behavior of the measures over time and this analysis is contained in Sections III and IV of the report.

TABLE C-1

```
STATE -- ALA

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1


    MEASURES OF MEAN,
    EQUALITY, AND
    FISCAL NEUTRALITY                     1972          1975
-----------------------------------------------------------------------------

 1.  MEAN EXP                        453.00000     704.00000
 2.  RANGE                           746.00000     783.00000
 3.  RES RANGE                       189.00000     328.00000
 4.  FED R R                            .52079        .57241
 5.  REL MN DEV                         .12216        .11373
 6.  PERM VAR                           .90258        .89356
 7.  VAR                            7307.00000   11250.00000
 8.  COEF VAR                           .18885        .15715
 9.  STD DEV LGS                        .15793        .14458
10.  GINI                               .08632        .08085
11.  SIM CORR                          0.00000       0.00000
12.  SLOPE W                           0.00000       0.00000
13.  SLOPE W2                          0.00000       0.00000
14.  SLOPE W3                          0.00000       0.00000
15.  EXP DIF                           0.00000       0.00000
16.  HICK GINI                         0.00000       0.00000
17.  MEAN W                            0.00000       0.00000
18.  STD DEV W                         0.00000       0.00000
19.  ELAST W                           0.00000       0.00000
20.  ELAST W2                          0.00000       0.00000
21.  ELAST W3                          0.00000       0.00000
```

Sources: Tables B-1 and B-2.

TABLE C-2

```
STATE -- ALA

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1


    MEASURES OF MEAN,
    EQUALITY, AND
    FISCAL NEUTRALITY                        1972            1975
-----------------------------------------------------------------------------------

 1.  MEAN EXP                           458.00000       710.00000
 2.  RANGE                              746.00000       783.00000
 3.  RES RANGE                          168.00000       229.00000
 4.  FED R R                               .43854          .38119
 5.  REL MN DEV                            .10156          .09493
 6.  PERM VAR                              .93382          .95152
 7.  VAR                               4522.00000      7343.00000
 8.  COEF VAR                              .14670          .12071
 9.  STD DEV LGS                           .12985          .11620
10.  GINI                                  .07131          .06569
11.  SIM CORR                             0.00000         0.00000
12.  SLOPE W                              0.00000         0.00000
13.  SLOPE W2                             0.00000         0.00000
14.  SLOPE W3                             0.00000         0.00000
15.  EXP DIF                              0.00000         0.00000
16.  HICK GINI                            0.00000         0.00000
17.  MEAN W                               0.00000         0.00000
18.  STD DEV W                            0.00000         0.00000
19.  ELAST W                              0.00000         0.00000
20.  ELAST W2                             0.00000         0.00000
21.  ELAST W3                             0.00000         0.00000
```

Sources: Tables B-1 and B-2.

TABLE C-3

STATE -- CA

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- UNIFIED

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1.	MEAN EXP	914.55000	970.45000	1064.30000	1225.10000	1300.90000
2.	RANGE	2080.60000	2917.00000	2237.60000	2472.90000	1985.50000
3.	RES RANGE	655.23000	782.46000	791.76000	907.24000	872.90000
4.	FED R R	.94938	1.07980	1.00170	.93586	.82225
5.	REL MN DEV	.17704	.19027	.19427	.14962	.15204
6.	PERM VAR	.90299	.88898	.89343	.91015	.78400
7.	VAR	58382.00000	70723.00000	86546.00000	90307.00000	78426.00000
8.	COFF VAR	.26420	.27404	.27641	.24529	.21528
9.	STD DEV LGS	.21712	.23022	.23041	.24506	.18450
10.	GINI	.12312	.13152	.13254	.11631	.10327
11.	SIM CORR	.82971	.83627	.80918	.81204	.79194
12.	SLOPE W	4.31300	4.51400	4.46300	4.04400	3.83480
13.	SLOPE W2	4.07000	4.60210	4.76690	4.00670	3.85720
14.	SLOPE W3	4.48520	4.77620	4.79180	4.24930	3.39860
15.	EXP DIF	427.73000	476.97000	512.23000	524.13000	433.74000
16.	HICK GINI	.10533	.11223	.11137	.07493	.08344
17.	MEAN W	64.72200	69.53600	75.06600	82.40400	88.33100
18.	STD DEV W	46.48200	49.26800	53.34900	60.64300	61.01600
19.	ELAST W	.30523	.32344	.31478	.27082	.24680
20.	ELAST W2	.28803	.32976	.33621	.24967	.24832
21.	ELAST W3	.31741	.34223	.35797	.28465	.24347

Sources: Tables B-3 through B-7.

TABLE C-4

STATE -- CAL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- UNIFIED

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1.	MEAN EXP	857.51000	924.61000	1038.00000	1152.84000	1245.40000
2.	RANGE	2080.60000	2917.80000	2237.60000	2472.90000	1983.50000
3.	RES RANGE	490.70000	470.51000	612.86000	535.91000	480.80000
4.	FED R R	.71285	.77992	.76037	.53546	.45246
5.	REL MN DEV	.12286	.12294	.14214	.10327	.09695
6.	PERM VAR	.92245	.85683	.88758	.94359	.72343
7.	VAR	27384.00000	32459.00000	37507.00000	35971.00000	34755.00000
8.	COEF VAR	.19254	.17515	.18658	.16452	.14966
9.	STD DEV LOG	.16806	.17005	.17256	.14276	.13231
10.	GINI	.08600	.09198	.09719	.07508	.07069
11.	SIMP CORR	.80109	.83173	.80616	.77746	.76453
12.	SLOPE W	5.42690	5.88030	5.73680	5.04970	4.34860
13.	SLOPE W2	5.41790	6.20650	6.49080	5.24220	4.76570
14.	SLOPE W3	5.23490	6.21600	6.97610	5.19450	4.46050
15.	EXP DIF	254.81000	317.42000	375.22000	300.61000	303.76000
16.	HICK GINI	.07134	.07923	.08226	.05940	.05550
17.	MEAN W	49.02200	51.48800	55.56000	59.62800	64.22700
18.	STD DEV W	24.42800	25.52800	27.12100	29.24000	31.34600
19.	ELAST W	.30952	.32745	.30814	.28124	.23454
20.	ELAST W2	.30901	.34562	.34741	.27120	.25605
21.	ELAST W3	.29857	.34615	.36805	.28666	.23062

Sources: Tables B-3 through B-7.

TABLE C-5

STATE -- CAL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE --HIGH SCHOOL

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1. MEAN EXP	1111.90000	1176.00000	1294.40000	1421.90000	1461.80000
2. RANGE	1272.70000	1499.70000	1565.00000	1727.10000	1779.10000
3. RES RANGE	978.98000	994.56000	897.70000	1174.30000	1002.90000
4. FED R R	1.17290	1.12420	.91497	1.17220	.94491
5. REL MN DEV	.16900	.17428	.16796	.16728	.15135
6. PERM VAR	.91127	.88695	.87318	.87373	.88790
7. VAR	69284.00000	84689.00000	83113.00000	101460.00000	96130.00000
8. COEF VAR	.23672	.24746	.22272	.22401	.21211
9. STD DEV LGS	.20905	.21851	.20562	.20697	.19486
10. GINI	.11806	.12352	.11748	.11765	.10960
11. SIM CORR	.86281	.84979	.81675	.81769	.70654
12. SLOPE W	1.89330	1.97830	1.92970	2.26730	1.60740
13. SLOPE W2	2.58830	2.55240	2.58890	2.70430	2.37290
14. SLOPE W3	2.52210	2.51130	2.57950	2.74570	2.29490
15. EXP DIF	594.69000	616.66000	623.64000	615.31000	616.29000
16. WICK GINI	.10342	.10455	.09827	.07661	.08663
17. MEAN W	182.04000	195.12000	205.84000	219.12000	235.36000
18. STD DEV W	119.96000	125.01000	122.02000	114.87000	136.29000
19. ELAST W	.30997	.32824	.30687	.34302	.25702
20. ELAST W2	.42376	.42349	.41170	.40913	.36258
21. ELAST W3	.41292	.41667	.41020	.41237	.36981

Sources: Tables B-8 through B-12.

TABLE C-6

STATE -- CAL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- HIGH SCHOOL

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1.	MEAN EXP	1027.70000	1080.20000	1182.00000	1267.20000	1317.40000
2.	RANGE	1972.70000	1899.70000	1565.00000	1727.10000	1779.10000
3.	RES RANGE	711.27000	760.99000	844.17000	792.77000	768.03000
4.	FED R R	.96609	1.01720	1.03410	.84793	.84166
5.	REL MN DEV	.12504	.12918	.12543	.12714	.12380
6.	PERM VAR	.91171	.89987	.87686	.86109	.86760
7.	VAR	32604.00000	38376.00000	44427.00000	54701.00000	45246.00000
8.	COEF VAR	.17570	.18136	.17833	.18457	.16147
9.	STD DEV LOG	.16630	.17384	.17382	.18065	.15864
10.	GINI	.09127	.09470	.09401	.09976	.08826
11.	SIM CORR	.82881	.83213	.82732	.81013	.79167
12.	SLOPE W	2.46840	2.58880	2.63750	2.71610	1.92640
13.	SLOPE W2	2.97100	3.10980	3.12920	3.08970	2.49140
14.	SLOPE W3	2.96970	3.12610	3.13940	3.14050	2.58630
15.	EXP DIF	560.04000	494.37000	615.70000	435.67000	614.74000
16.	MICK GINI	.07826	.08130	.07868	.07463	.06787
17.	MEAN W	133.07000	139.64000	148.65000	156.04000	169.99000
18.	STD DEV W	60.62900	62.96800	66.11700	69.78200	81.49400
19.	ELAST W	.31962	.33466	.33170	.30445	.24795
20.	ELAST W2	.39469	.40201	.39357	.38846	.42067
21.	ELAST W3	.38453	.40412	.39482	.38302	.42516

Sources: Tables B-8 through B-12.

TABLE C-7

STATE -- CAL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- ELEMENTARY

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1. MEAN EXP	885.99000	924.13000	1037.00000	1258.80000	1366.80000
2. RANGE	3983.90000	4733.40000	5977.50000	14418.00000	9695.80000
3. RES RANGE	1098.90000	1949.10000	1345.00000	1526.10000	1514.10000
4. FED R R	1.99710	2.21760	2.16270	1.97760	1.69400
5. REL MN DEV	.30464	.30887	.31619	.30453	.28856
6. PERM VAR	.86027	.84885	.84638	.88537	.87105
7. VAR	165520.00000	175930.00000	278020.00000	561020.00000	588380.00000
8. COFF VAR	.45920	.45271	.50848	.60461	.55704
9. STD DEV LGS	.34759	.35292	.36123	.39892	.33426
10. GINI	.20704	.21010	.21649	.21053	.19946
11. SIM CORR	.77388	.79033	.79315	.74615	.38611
12. SLOPE W	1.11490	1.20010	1.39700	1.38070	1.01210
13. SLOPE W2	1.58300	1.44850	1.68110	.92805	1.51240
14. SLOPE W3	1.97150	1.97180	1.99750	2.21680	1.80750
15. EXP DIF	1120.70000	1899.00000	1144.40000	1676.90000	1946.10000
16. HIGH GINI	.17118	.16970	.17627	.18441	.15282
17. MEAN W	168.32000	190.20000	199.77000	225.23000	295.76000
18. STD DEV W	282.39000	275.51000	299.36000	367.58000	424.92000
19. ELAST W	.21181	.23401	.26912	.27648	.18790
20. ELAST W2	.30074	.28245	.32388	.18873	.28089
21. ELAST W3	.37454	.38449	.36554	.40304	.33570

Sources: Tables B-13 through B-17.

TABLE C-8

STATE -- CAL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- ELEMENTARY

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1971	1972	1973	1974
1. MEAN EXP	778.12000	817.64000	907.37000	1072.34000	1168.74000
2. RANGE	3983.90000	4733.40000	5977.50000	14418.00000	7595.40000
3. RES RANGE	478.70000	444.03000	555.59000	579.24000	575.72000
4. FED R R	.79470	.80030	.79822	.67977	.59763
5. REL MN DEV	.14990	.15750	.14989	.14698	.13094
6. PERM VAR	.91537	.89820	.90988	.92756	.90231
7. VAR	28251.00000	33442.00000	38294.00000	45028.00000	47356.00000
8. COEF VAR	.21601	.22532	.21566	.19789	.18617
9. STD DEV LGS	.18775	.19804	.18928	.17117	.16032
10. GINI	.10539	.11181	.10598	.09564	.08969
11. SIM CORR	.67202	.68868	.67898	.64260	.61748
12. SLOPE W	1.79370	1.98620	1.98310	1.94580	1.57470
13. SLOPE W2	2.34980	2.47750	2.45850	2.37800	1.98050
14. SLOPE W3	2.84600	3.04920	2.89110	2.79840	2.86270
15. EXP DIF	358.61000	449.86000	387.74000	407.09000	462.14000
16. HICK GINI	.07764	.08372	.07367	.06591	.06229
17. MEAN W	64.62100	70.19300	76.71800	84.19300	96.66100
18. STD DEV W	62.97400	63.88100	67.00200	73.01000	97.78000
19. ELAST W	.14896	.17051	.16767	.13110	.11368
20. ELAST W2	.19515	.21269	.20787	.18815	.16378
21. ELAST W3	.23635	.26177	.24444	.21856	.19838

Sources: Tables B-13 through B-17.

TABLE C-9

STATE -- COL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1974
1.	MEAN EXP	1184.40000	1527.80000
2.	RANGE	2606.00000	3116.00000
3.	RES RANGE	1326.00000	1694.00000
4.	FED R R	1.89700	1.69230
5.	REL MN DEV	.27160	.26560
6.	PERM VAR	.87127	.88089
7.	VAR	201150.00000	308910.00000
8.	COEF VAR	.37867	.36390
9.	STD DEV LGS	.32600	.31000
10.	GINI	.19058	.18227
11.	SIM CORR	.88940	.81900
12.	SLOPE W	27.13400	27.94800
13.	SLOPE W2	31.54000	33.25100
14.	SLOPE W3	32.07100	34.04800
15.	EXP DIF	949.32000	1165.10000
16.	HICK GINI	.17243	.15790
17.	MEAN W	18.46500	21.82300
18.	STD DEV W	14.70100	16.29100
19.	ELAST W	.42302	.39927
20.	ELAST W2	.49171	.47511
21.	ELAST W3	.49999	.48643

Sources: Tables B-18 and B-19.

TABLE C-10

STATE -- COL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1974
1.	MEAN EXP	1010.00000	1317.20000
2.	RANGE	2606.00000	3116.00000
3.	RES RANGE	510.00000	754.00000
4.	FED R R	.70657	.75475
5.	REL MN DEV	.14037	.14278
6.	PERM VAR	.83140	.85803
7.	VAR	35653.00000	63458.00000
8.	COEF VAR	.18674	.19122
9.	STD DEV LGS	.18314	.17900
10.	GINI	.09964	.10069
11.	SIM CORR	.79650	.79000
12.	SLOPE W	26.08800	26.95500
13.	SLOPE W2	29.37300	35.33600
14.	SLOPE W3	31.97800	36.90400
15.	EXP DIF	372.05000	548.81000
16.	HICK GINI	.08358	.08347
17.	MEAN W	11.16200	14.06900
18.	STD DEV W	5.76340	7.38130
19.	ELAST W	.28831	.28791
20.	ELAST W2	.32462	.37742
21.	ELAST W3	.35340	.39417

Sources: Tables B-18 and B-19.

TABLE C-11

STATE -- FLA

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1973	1974	1975
1.	MEAN EXP	970.11000	1179.10000	1341.40000	1344.30000
2.	RANGE	493.48000	607.83000	712.47000	753.44000
3.	RES RANGE	378.00000	469.75000	416.01000	402.92000
4.	FED R R	.46280	.48180	.35890	.35560
5.	REL MN DEV	.09130	.09875	.07585	.08514
6.	PERM VAR	.91182	.91280	.91621	.92460
7.	VAR	12513.00000	21951.00000	17674.00000	19866.00000
8.	COEF VAR	.11531	.12372	.09911	.10485
9.	STD DEV LOG	.11400	.12100	.09800	.10300
10.	GINI	.06358	.06863	.05413	.05779
11.	SIM CORR	.47319	.31919	.42543	.54038
12.	SLOPE W	3.45860	1.38770	1.79790	1.97090
13.	SLOPE W2	3.96910	2.80790	1.75080	1.74060
14.	SLOPE W3	3.33710	2.42620	1.78980	1.99870
15.	EXP DIF	118.72000	143.32000	109.96000	138.34000
16.	WICK GINI	.00123	.00080	.00165	.00340
17.	MEAN W	35.47500	49.98000	60.86700	69.10400
18.	STD DEV W	18.01700	33.55300	31.31200	38.64300
19.	ELAST W	.13197	.05882	.08118	.10131
20.	ELAST W2	.12123	.11902	.07905	.08948
21.	ELAST W3	.12375	.10284	.08081	.10274

Sources: Tables B-21 through B-24.

TABLE C-12

STATE -- FLA

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1973	1974	1975
1.	MEAN EXP	953.48000	1187.30000	1343.60000	1374.80000
2.	RANGE	493.48000	607.83000	712.47000	753.44000
3.	RES RANGE	221.46000	309.32000	339.51000	359.62000
4.	FED R R	.96270	.30400	.28500	.30570
5.	REL MN DEV	.07310	.09430	.07383	.08560
6.	PERM VAR	.94384	.92016	.92116	.94676
7.	VAR	7091.90000	16061.00000	13234.00000	18055.00000
8.	COEF VAR	.08820	.10674	.08562	.09774
9.	STD DEV LOG	.08900	.10700	.08700	.09800
10.	GINI	.04906	.05980	.04824	.05507
11.	SIM CORR	.76347	.61781	.73503	.77344
12.	SLOPE W	3.74280	3.25950	3.08390	3.28320
13.	SLOPE W2	3.76540	4.69620	3.21940	3.36150
14.	SLOPE W3	4.40850	4.85070	3.24920	3.67240
15.	EXP DIF	142.91000	926.91000	176.88000	223.13000
16.	MICK GINI	0.00000	0.00000	0.00000	.00345
17.	MEAN W	38.41300	54.57200	71.00800	79.96100
18.	STD DEV W	17.17800	24.02100	27.34400	31.68500
19.	ELAST W	.15072	.14987	.16298	.19096
20.	ELAST W2	.15163	.21593	.17814	.19551
21.	ELAST W3	.17753	.22303	.17172	.21559

Sources: Tables B-21 through B-24.

TABLE C-13

STATE -- GA

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	570.00000	845.00000
2.	RANGE	772.00000	8385.00000
3.	RES RANGE	225.00000	444.00000
4.	FED R R	.48280	.70290
5.	REL MN DEV	.09243	.17444
6.	PERM VAR	.90945	.88197
7.	VAR	6523.00000	334640.00000
8.	COEF VAR	.14182	.68462
9.	STD DEV LGS	.13368	.32914
10.	GINI	.06870	.13370
11.	SIM CORR	.55160	.93220
12.	SLOPE W	8.19100	20.96900
13.	SLOPE W2	8.50660	6.68460
14.	SLOPE W3	9.04730	0.00000
15.	EXP DIF	98.32700	344.72000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	16.53000	27.79000
18.	STD DEV W	5.43800	25.71700
19.	ELAST W	.23754	.68982
20.	ELAST W2	.24669	.21990
21.	ELAST W3	.26237	0.00000

Sources: Tables B-25 and B-26.

TABLE C-14

STATE -- GA

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	628.00000	576.00000
2.	RANGE	772.00000	8385.00000
3.	RES RANGE	772.00000	1015.00000
4.	FED R R	2.80030	2.76330
5.	REL MN DEV	.21983	.21123
6.	PERM VAR	.84879	.83536
7.	VAR	35029.00000	86683.00000
8.	COEF VAR	.29793	.33620
9.	STD DEV LGS	.31078	.34770
10.	GINI	.15770	.15680
11.	SIM CORR	.58160	.93050
12.	SLOPE W	9.68100	20.95000
13.	SLOPE W2	9.86060	7.51690
14.	SLOPE W3	10.10700	0.00000
15.	EXP DIF	111.67000	377.96000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	17.51400	27.35300
18.	STD DEV W	6.66400	12.40500
19.	ELAST W	.26999	.65416
20.	ELAST W2	.27500	.23471
21.	ELAST W3	.28187	0.00000

Sources: Tables B-25 and B-26.

TABLE C-15

STATE -- ILL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- UNIT

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	990.74000	1196.50000
2.	RANGE	439.85000	1091.30000
3.	RES RANGE	336.83000	506.61000
4.	FED R R	.39370	.51890
5.	REL MN DEV	.08127	.10656
6.	PERM VAR	.94400	.91080
7.	VAR	11157.00000	26714.00000
8.	COEF VAR	.10661	.13774
9.	STD DEV LGS	.10200	.13300
10.	GINI	.05680	.07520
11.	SIM CORR	.67844	.30130
12.	SLOPE W	6.43260	3.73140
13.	SLOPE W2	5.79060	1.65210
14.	SLOPE W3	7.63800	1.75510
15.	EXP DIF	165.44000	29.79300
16.	HICK GINI	.04060	.01220
17.	MEAN W	24.18700	26.87400
18.	STD DEV W	11.14000	13.19700
19.	ELAST W	.15704	.08452
20.	ELAST W2	.14137	.03742
21.	ELAST W3	.18647	.03976

Sources: Tables B-27 and B-28.

TABLE C-16

STATE -- ILL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- UNIT

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	1035.60000	1396.20000
2.	RANGE	939.85000	1091.30000
3.	RES RANGE	252.11000	769.75000
4.	FED R R	.28860	.77740
5.	REL MN DEV	.08526	.19633
6.	PERM VAR	.94760	.91330
7.	VAR	9830.60000	90106.00000
8.	COEF VAR	.09574	.21500
9.	STD DEV LOG	.09700	.21600
10.	GINI	.05250	.11980
11.	SIM CORR	.59011	.24528
12.	SLOPE W	8.12780	9.11300
13.	SLOPE W2	10.94600	14.20100
14.	SLOPE W3	10.59500	13.33100
15.	EXP DIF	153.23000	219.64000
16.	HICK GINI	.03640	0.00000
17.	MEAN W	22.88400	25.05300
18.	STD DEV W	7.19870	8.07750
19.	ELAST W	.17960	.16352
20.	ELAST W2	.24138	.25402
21.	ELAST W3	.23412	.23921

Sources: Tables B-27 and B-28.

TABLE C-17

STATE -- ILL

UNIT OF ANALYSIS -- WGT PUPIL

DISTRICT TYPE --UNIT

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	820.64000	1125.20000
2.	RANGE	774.04000	1061.90000
3.	RES RANGE	267.57000	379.52000
4.	FED R R	.35330	.42000
5.	REL MN DEV	.09570	.11126
6.	PERM VAR	.87900	.92060
7.	VAR	9649.60000	20130.00000
8.	COEF VAR	.12094	.12609
9.	STD DEV LGS	.12000	.13100
10.	GINI	.06240	.06780
11.	SIM CORR	.80463	.10640
12.	SLOPE W	8.42390	2.18140
13.	SLOPE W2	11.21400	3.35710
14.	SLOPE W3	11.04700	3.58660
15.	EXP DIF	130.73000	52.46500
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	18.13300	20.19000
18.	STD DEV W	5.94530	6.92030
19.	ELAST W	.18614	.03914
20.	ELAST W2	.24779	.06024
21.	ELAST W3	.24410	.06436

Sources: Tables B-27 and B-28.

TABLE C-18

STATE -- ILL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- SECONDARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	1553.00000	1644.20000
2.	RANGE	1592.30000	1615.10000
3.	RES RANGE	954.07000	1076.60000
4.	FED R R	.95830	.84170
5.	REL MN DEV	.18249	.15105
6.	PERM VAR	.88230	.89620
7.	VAR	100780.00000	102340.00000
8.	COEF VAR	.23816	.19456
9.	STD DEV LGS	.22000	.18300
10.	GINI	.12570	.10470
11.	SIM CORR	.75219	.53719
12.	SLOPE W	6.77170	4.89810
13.	SLOPE W2	7.45270	4.90580
14.	SLOPE W3	7.48650	4.94550
15.	EXP DIF	515.96000	330.97000
16.	HICK GINI	.09140	.05030
17.	MEAN W	72.48200	74.07500
18.	STD DEV W	35.96300	35.08500
19.	ELAST W	.36872	.22067
20.	ELAST W2	.40581	.22102
21.	ELAST W3	.40765	.22281

Sources: Tables B-29 and B-30.

TABLE C-19

STATE -- ILL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- SECONDARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	1397.70000	1736.40000
2.	RANGE	1592.30000	1615.10000
3.	RES RANGE	892.90000	1137.90000
4.	FED R R	.87920	.86940
5.	REL MN DEV	.16848	.14163
6.	PERM VAR	.88050	.90300
7.	VAR	80988.00000	102460.00000
8.	COEF VAR	.20361	.18435
9.	STD DEV LGS	.20100	.17800
10.	GINI	.11460	.10120
11.	SIM CORR	.66067	.47796
12.	SLOPE W	8.84230	6.53050
13.	SLOPE W2	10.01100	7.28830
14.	SLOPE W3	9.98670	7.93640
15.	EXP DIF	423.75000	365.51000
16.	HICK GINI	.07620	.05050
17.	MEAN W	64.80600	70.40200
18.	STD DEV W	21.96300	23.42800
19.	ELAST W	.40998	.26473
20.	ELAST W2	.46417	.29550
21.	ELAST W3	.46305	.32178

Sources: Tables B-29 and B-30.

TABLE C-20

STATE -- ILL

UNIT OF ANALYSIS -- WGT PUPIL

DISTRICT TYPE -- SECONDARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	1109.90000	1376.50000
2.	RANGE	1274.70000	1290.00000
3.	RES RANGE	715.40000	935.74000
4.	FED R R	.88270	.91820
5.	REL MN DEV	.17229	.14584
6.	PERM VAR	.88790	.89710
7.	VAR	52835.00000	68252.00000
8.	COEF VAR	.20710	.18960
9.	STD DEV LGS	.20400	.18400
10.	GINI	.11660	.10470
11.	SIM CORR	.66567	.49303
12.	SLOPE W	9.00140	6.87350
13.	SLOPE W2	10.24400	7.86670
14.	SLOPE W3	10.22000	8.39960
15.	EXP DIF	346.40000	304.35000
16.	HICK GINI	.07810	.05350
17.	MEAN W	51.46200	55.80800
18.	STD DEV W	16.99800	18.73900
19.	ELAST W	.41736	.27868
20.	ELAST W2	.47498	.31894
21.	ELAST W3	.47386	.34053

Sources: Tables B-29 and B-30.

TABLE C-21

STATE -- ILL

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- ELEMENTARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	904.24000	1178.90000
2.	RANGE	1977.70000	2788.00000
3.	RES RANGE	593.47000	877.83000
4.	FED R R	.82600	1.04380
5.	REL MN DEV	.15646	.18715
6.	PERM VAR	.92110	.85270
7.	VAR	44097.00000	96964.00000
8.	COEF VAR	.23223	.26360
9.	STD DEV LGS	.19700	.23300
10.	GINI	.10830	.13280
11.	SIM CORR	.71486	.67070
12.	SLOPE W	4.22340	4.83850
13.	SLOPE W2	6.07610	5.84360
14.	SLOPE W3	5.76890	4.69220
15.	EXP DIF	405.61000	395.11000
16.	HICK GINI	.07820	.07100
17.	MEAN W	36.08700	43.10400
18.	STD DEV W	35.28700	43.07500
19.	ELAST W	.16855	.17693
20.	ELAST W2	.24249	.21356
21.	ELAST W3	.23023	.17156

Sources: Tables B-31 and B-32.

TABLE C-22

STATE -- ILL

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- ELEMENTARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	930.28000	1246.40000
2.	RANGE	1977.70000	2788.00000
3.	RES RANGE	574.30000	801.53000
4.	FED R W	.78210	.91450
5.	REL MN DEV	.14106	.14568
6.	PERM VAR	.92860	.85770
7.	VAR	34552.00000	65395.00000
8.	COEF VAR	.19981	.20517
9.	STD DEV LGS	.17900	.19900
10.	GINI	.10090	.10900
11.	SIM CORR	.70372	.51820
12.	SLOPE W	7.31950	5.96190
13.	SLOPE W2	8.81050	6.45050
14.	SLOPE W3	8.90090	6.19970
15.	EXP DIF	317.92000	275.16000
16.	HICK GINI	.07530	.05100
17.	MEAN W	29.50200	36.18600
18.	STD DEV W	17.85000	22.22700
19.	ELAST W	.23212	.17309
20.	ELAST W2	.27941	.18727
21.	ELAST W3	.28227	.17999

Sources: Tables B-31 and B-32.

TABLE C-23

STATE -- ILL

UNIT OF ANALYSIS -- WGT PUPIL

DISTRICT TYPE -- ELEMENTARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	911.72000	1216.10000
2.	RANGE	1843.50000	2781.00000
3.	RES RANGE	612.14000	819.95000
4.	FED R R	.88080	.96770
5.	REL MN DEV	.15127	.15655
6.	PERM VAR	.91300	.86660
7.	VAR	36913.00000	68271.00000
8.	COEF VAR	.21073	.21486
9.	STD DEV LGS	.19300	.20700
10.	GINI	.10810	.11500
11.	SIM CORR	.70628	.54572
12.	SLOPE W	7.73370	6.47430
13.	SLOPE W2	9.37860	7.25500
14.	SLOPE W3	9.64910	7.25570
15.	EXP DIF	339.16000	319.60000
16.	HICK GINI	.08070	.05930
17.	MEAN W	28.90800	35.30400
18.	STD DEV W	17.54600	22.02400
19.	ELAST W	.24522	.18795
20.	ELAST W2	.29737	.21062
21.	ELAST W3	.30595	.21064

Sources: Tables B-31 and B-32.

TABLE C-24

STATE -- KANS

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1974
1.	MEAN EXP	1011.00000	1946.00000
2.	RANGE	3597.00000	4553.00000
3.	RES RANGE	884.00000	2199.00000
4.	FED R W	1.34970	1.95750
5.	REL MN DEV	.22645	.28616
6.	PERM VAR	.81482	.78572
7.	VAR	103740.00000	532040.00000
8.	COEF VAR	.31865	.37482
9.	STD DEV LGS	.29598	.35318
10.	GINI	.16030	.20050
11.	SIM CORR	.56950	.84490
12.	SLOPE W	9.74500	20.93100
13.	SLOPE W2	11.12700	25.15900
14.	SLOPE W3	0.00000	0.00000
15.	EXP DIF	419.53000	1484.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	35.21700	52.03400
18.	STD DEV W	18.82200	29.44400
19.	ELAST W	.33946	.55967
20.	ELAST W2	.38760	.67273
21.	ELAST W3	0.00000	0.00000

Sources: Tables B-33 and B-34.

TABLE C-25

STATE -- KANS

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1974
1.	MEAN EXP	889.00000	1494.00000
2.	RANGE	3397.00000	4553.00000
3.	RES RANGE	650.00000	1320.00000
4.	FED R R	1.06790	1.30840
5.	REL MN DEV	.17683	.21761
6.	PERM VAR	.82746	.88501
7.	VAR	53850.00000	221410.00000
8.	COEF VAR	.26113	.31708
9.	STD DEV LGS	.29135	.28951
10.	GINI	.13240	.15580
11.	SIM CORR	.57080	.84630
12.	SLOPE W	9.78600	21.02100
13.	SLOPE W2	11.21500	25.32400
14.	SLOPE W3	0.00000	0.00000
15.	EXP DIF	420.06000	1485.40000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	26.44300	36.57900
18.	STD DEV W	10.63400	17.49400
19.	ELAST W	.29108	.51814
20.	ELAST W2	.33359	.62421
21.	ELAST W3	0.00000	0.00000

Sources: Tables B-33 and B-34.

TABLE C-26

STATE -- KTY

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	615.48000	865.59000
2.	RANGE	559.83000	838.42000
3.	RLS RANGE	282.06000	307.85000
4.	FED R R	.54652	.41961
5.	REL MN DEV	.11001	.10700
6.	PERM VAR	.90067	.90426
7.	VAR	8491.80000	17693.00000
8.	COEF VAR	.14972	.15367
9.	STD DEV LGS	.13800	.13800
10.	GINI	.07716	.07619
11.	SIM CORR	.60660	.57330
12.	SLOPE W	3.75100	4.08500
13.	SLOPE W2	3.49500	3.75400
14.	SLOPE W3	3.15700	3.05900
15.	EXP DIF	94.08800	114.18000
16.	HICK GINI	.04578	.04520
17.	MEAN W	36.30000	48.36400
18.	STD DEV W	14.90200	18.66500
19.	ELAST W	.22123	.22825
20.	ELAST W2	.20613	.20975
21.	ELAST W3	.18619	.17092

Sources: Tables B-35 and B-36.

TABLE C-27

STATE -- KTY

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	659.92000	950.47000
2.	RANGE	559.83000	838.42000
3.	RES RANGE	407.32000	651.03000
4.	FED R R	.78834	.88407
5.	REL MN DEV	.16509	.19359
6.	PERM VAR	.92096	.92333
7.	VAR	16354.00000	51082.00000
8.	COEF VAR	.19376	.23779
9.	STD DEV LGS	.18578	.21852
10.	GINI	.10674	.12463
11.	SIM CORR	.70890	.78380
12.	SLOPE W	6.36800	8.26000
13.	SLOPE W2	6.66900	8.29700
14.	SLOPE W3	8.91100	10.17500
15.	EXP DIF	236.40000	416.70000
16.	HICK GINI	.08229	.10573
17.	MEAN W	39.26200	55.32300
18.	STD DEV W	14.23600	21.44600
19.	ELAST W	.37836	.48078
20.	ELAST W2	.39677	.48255
21.	ELAST W3	.53016	.59225

Sources: Tables B-35 and B-36.

TABLE C-28

STATE -- LOU

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	703.00000	1039.00000
2.	RANGE	405.00000	585.00000
3.	RES RANGE	244.00000	399.00000
4.	FED R R	.40956	.44165
5.	REL MN DEV	.07963	.08692
6.	PERM VAR	.90942	.92144
7.	VAR	5156.00000	15195.00000
8.	COEF VAR	.10208	.11860
9.	STD DEV LOG	.09950	.11038
10.	GINI	.05571	.06111
11.	SIM CORR	.17407	.28082
12.	SLOPE W	3.17260	6.95350
13.	SLOPE W2	15.36200	28.37100
14.	SLOPE W3	12.63400	23.83300
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	6.31800	6.59400
18.	STD DEV W	3.97000	5.01600
19.	ELAST W	.02851	.04279
20.	ELAST W2	.13806	.17459
21.	ELAST W3	.11354	.14667

Sources: Tables B-37 and B-38.

TABLE C-29

STATE -- LOU

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	705.00000	1049.00000
2.	RANGE	405.00000	585.00000
3.	RES RANGE	179.00000	283.00000
4.	FED R R	.29388	.31165
5.	REL MN DEV	.07259	.07963
6.	PERM VAR	.92799	.90618
7.	VAR	3685.00000	10135.00000
8.	COEF VAR	.08597	.09594
9.	STD DEV LGS	.08625	.09492
10.	GINI	.04841	.05342
11.	SIM CORR	.38615	.36969
12.	SLOPE W	6.32670	8.63250
13.	SLOPE W2	11.26700	16.49600
14.	SLOPE W3	11.08600	17.01900
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	7.23500	7.19500
18.	STD DEV W	3.24700	3.80100
19.	ELAST W	.06493	.05921
20.	ELAST W2	.11563	.11314
21.	ELAST W3	.11377	.11673

Sources: Tables B-37 and B-38.

TABLE C-30

STATE -- MAINE

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	938.00000	1113.00000
2.	RANGE	9919.00000	3379.00000
3.	RES RANGE	1180.00000	1014.00000
4.	FED R W	2.32650	1.40190
5.	REL MN DEV	.30492	.21164
6.	PERM VAR	.80590	.85106
7.	VAR	463490.00000	134930.00000
8.	COEF VAR	.72546	.33014
9.	STD DEV LGS	.38544	.29195
10.	GINI	.22510	.15360
11.	SIM CORR	.57670	.31500
12.	SLOPE W	3.13000	.85400
13.	SLOPE W2	2.11180	2.39330
14.	SLOPE W3	0.00000	0.00000
15.	EXP DIF	530.81000	649.50000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	60.89500	77.41500
18.	STD DEV W	125.44000	135.44000
19.	ELAST W	.20320	.05940
20.	ELAST W2	.13710	.16647
21.	ELAST W3	0.00000	0.00000

Sources: Tables B-39 and B-40.

TABLE C-31

STATE -- MAINE

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	824.00000	1036.00000
2.	RANGE	9919.00000	3379.00000
3.	RES RANGE	548.00000	619.00000
4.	FED R H	.97030	.85510
5.	REL MN DEV	.15661	.13606
6.	PERM VAR	.85029	.87994
7.	VAR	35088.00000	36023.00000
8.	COEF VAR	.22720	.18319
9.	STD DEV LGS	.22692	.20336
10.	GINI	.11550	.09820
11.	SIM CORR	.57680	.31600
12.	SLOPE W	3.13300	.86300
13.	SLOPE W2	2.13550	2.40070
14.	SLOPE W3	0.00000	0.00000
15.	EXP DIF	519.11000	629.71000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	30.28300	42.51900
18.	STD DEV W	21.64100	31.42500
19.	ELAST W	.11514	.03542
20.	ELAST W2	.07848	.09853
21.	ELAST W3	0.00000	0.00000

Sources: Tables B-39 and B-40.

TABLE C-32

STATE -- MICH

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1972	1973	1974
1. MEAN EXP	835.95000	916.00000	1022.73000	1131.96000
2. RANGE	647.72000	1928.50000	1130.80000	1158.50000
3. RES RANGE	354.76000	456.89000	459.40000	473.18000
4. FED R R	.50400	.50400	.54976	.50393
5. REL MN DEV	.10154	.10214	.09794	.09740
6. PERM VAR	.93057	.93493	.92229	.92079
7. VAR	14167.00000	17934.00000	20679.00000	22787.00000
8. COEF VAR	.14238	.14620	.14061	.13337
9. STD DEV LOG	.13045	.13159	.13031	.12514
10. GINI	.07233	.07221	.07170	.06976
11. SIM CORR	.60040	.59916	.58254	.51887
12. SLOPE W	3.45270	3.86800	3.50470	2.71390
13. SLOPE W2	4.13570	3.79610	3.46520	3.29720
14. SLOPE W3	4.11770	3.84380	3.84790	2.98490
15. EXP DIF	147.92000	160.82000	142.55000	178.41000
16. WICK GINI	.04270	.04275	.03614	.03228
17. MEAN W	34.85000	38.45600	42.22900	47.81600
18. STD DEV W	18.88000	20.77300	23.90200	26.06500
19. ELAST W	.16492	.16239	.14471	.11463
20. ELAST W2	.17268	.15937	.14308	.13929
21. ELAST W3	.17181	.16137	.12585	.12609

Sources: Tables B-43 through B-46.

TABLE C-33

STATE -- MICH

UNIT OF ANALYSIS -- WGHT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1972	1973	1974
1.	MEAN EXP	882.42000	947.64000	1079.80000	1189.10000
2.	RANGE	947.72000	1278.50000	1130.80000	1158.50000
3.	RES RANGE	422.06000	459.12000	487.99000	536.95000
4.	FED R R	.58704	.55479	.55472	.55467
5.	REL MN DEV	.10834	.11858	.09522	.09339
6.	PERM VAR	.92506	.91482	.90478	.92287
7.	VAR	17151.00000	21378.00000	21974.00000	24657.00000
8.	COEF VAR	.14841	.15436	.13734	.13206
9.	STD DEV LOG	.13901	.14353	.13016	.12592
10.	GINI	.07800	.08138	.07138	.06965
11.	SIM CORR	.71540	.62802	.63670	.61423
12.	SLOPE W	6.16590	5.57900	5.20920	4.68510
13.	SLOPE W2	6.25490	5.57100	5.49890	5.25500
14.	SLOPE W3	6.36690	5.65580	5.27480	4.82550
15.	EXP DIF	189.41000	151.13000	189.81000	197.32000
16.	HICK GINI	.05465	.05038	.04415	.04036
17.	MEAN W	37.79400	40.79300	44.15000	48.55600
18.	STD DEV W	15.15200	16.46600	18.11900	20.58600
19.	ELAST W	.26409	.24016	.21309	.19131
20.	ELAST W2	.26790	.23981	.22494	.21958
21.	ELAST W3	.27269	.24351	.21577	.19696

Sources: Tables B-43 through B-46.

TABLE C-34

STATE -- MINN

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1975
1.	MEAN EXP	948.59000	1419.50000
2.	RANGE	1430.00000	1083.00000
3.	RES RANGE	444.00000	506.00000
4.	FED R R	.57963	.45668
5.	REL MN DEV	.11240	.09554
6.	PERM VAR	.90666	.91103
7.	VAR	24115.00000	34052.00000
8.	COEF VAR	.16371	.13988
9.	STD DEV LGS	.15100	.12500
10.	GINI	.08169	.06852
11.	SIM CORR	.25970	.11030
12.	SLOPE W	6.62800	2.05800
13.	SLOPE W2	5.80300	4.54800
14.	SLOPE W3	1.70000	3.49500
15.	EXP DIF	11.22800	67.22500
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	10.30900	15.45600
18.	STD DEV W	6.08500	9.89300
19.	ELAST W	.07203	.02411
20.	ELAST W2	.06307	.05328
21.	ELAST W3	.01848	.04094

Sources: Tables B-47 and B-48.

TABLE C-35

STATE -- MINN

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1975
1.	MEAN EXP	972.66000	1354.20000
2.	RANGE	1430.00000	1083.00000
3.	RES RANGE	401.00000	562.00000
4.	FED R R	.50440	.49779
5.	REL MN DEV	.10352	.09916
6.	PERM VAR	.91754	.92969
7.	VAR	22009.00000	28795.00000
8.	COEF VAR	.15252	.12531
9.	STD DEV LGS	.14757	.12207
10.	GINI	.07611	.06959
11.	SIM CORR	.41270	.41110
12.	SLOPE W	12.95300	10.96500
13.	SLOPE W2	11.98400	13.80700
14.	SLOPE W3	10.88200	13.66500
15.	EXP DIF	100.35000	173.89000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	10.98400	15.31400
18.	STD DEV W	4.72730	6.36230
19.	ELAST W	.14627	.12400
20.	ELAST W2	.13553	.15614
21.	ELAST W3	.12289	.15453

Source: Tables B-47 and B-48.

TABLE C-36

STATE -- MISS

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1975
1.	MEAN EXP	464.00000	725.00000
2.	RANGE	333.00000	540.00000
3.	RES RANGE	186.00000	272.00000
4.	FED R R	.48369	.45743
5.	REL MN DEV	.10281	.08697
6.	PERM VAR	.91856	.91432
7.	VAR	3613.00000	6848.00000
8.	COEF VAR	.12956	.11409
9.	STD DEV LGS	.16444	.11014
10.	GINI	.07080	.06193
11.	SIM CORR	.41767	.47717
12.	SLOPE W	2.07140	2.73820
13.	SLOPE W2	4.97400	4.93260
14.	SLOPE W3	4.55030	4.69310
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	5.59600	6.80700
18.	STD DEV W	12.16100	14.46900
19.	ELAST W	.02498	.02571
20.	ELAST W2	.05999	.04631
21.	ELAST W3	.05488	.04406

Sources: Tables B-49 and B-50.

TABLE C-37

STATE -- MISS

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1971	1975
1.	MEAN EXP	478.00000	744.00000
2.	RANGE	333.00000	540.00000
3.	RES RANGE	302.00000	485.00000
4.	FED R R	.77926	.78678
5.	REL MN DEV	.12267	.10907
6.	PERM VAR	.92355	.92618
7.	VAR	5710.00000	13138.00000
8.	COEF VAR	.15796	.15400
9.	STD DEV LGS	.14841	.14133
10.	GINI	.08431	.07856
11.	SIM CORR	.73980	.79241
12.	SLOPE W	1.75630	2.47750
13.	SLOPE W2	4.75650	4.26670
14.	SLOPE W3	2.14480	5.51570
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	14.82400	17.57000
18.	STD DEV W	11.85000	14.11300
19.	ELAST W	.05447	.05851
20.	ELAST W2	.14751	.10076
21.	ELAST W3	.06652	.13026

Sources: Tables B-49 and B-50.

TABLE C-38

STATE -- MO

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- UNIFIED

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	909.83000	1081.30000
2.	RANGE	2283.90000	2322.50000
3.	RES RANGE	425.09000	496.15000
4.	FED R R	.56714	.55691
5.	REL MN DEV	.11769	.11879
6.	PERM VAR	.87463	.87629
7.	VAR	29794.00000	30131.00000
8.	COEF VAR	.18971	.18059
9.	STD DEV LGS	.15300	.15100
10.	GINI	.08319	.08299
11.	SIM CORR	.75400	.73690
12.	SLOPE W	21.59100	19.96800
13.	SLOPE W2	15.44100	14.95900
14.	SLOPE W3	15.23200	15.08400
15.	EXP DIF	182.75000	219.64000
16.	HICK GINI	.05895	.05882
17.	MEAN W	12.42200	15.31300
18.	STD DEV W	6.02800	7.20600
19.	ELAST W	.29478	.28278
20.	ELAST W2	.21082	.21164
21.	ELAST W3	.20796	.21361

Sources: Tables B-51 and B-52.

TABLE C-39

STATE -- MO

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- UNIFIED

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	991.72000	1157.70000
2.	RANGE	2283.90000	2322.50000
3.	RES RANGE	507.11000	502.89000
4.	FED R R	.65984	.57304
5.	REL MN DEV	.14013	.12925
6.	PERM VAR	.92622	.93162
7.	VAR	39157.00000	44510.00000
8.	COEF VAR	.19953	.18223
9.	STD DEV LGS	.17461	.16282
10.	GINI	.09853	.09163
11.	SIM CORR	.82580	.80950
12.	SLOPE W	27.98800	24.93600
13.	SLOPE W2	24.37800	21.93500
14.	SLOPE W3	24.34700	21.68600
15.	EXP DIF	281.11000	298.48000
16.	HICK GINI	.07825	.07057
17.	MEAN W	13.88400	16.77100
18.	STD DEV W	5.83830	6.85230
19.	ELAST W	.39183	.36123
20.	ELAST W2	.34129	.31776
21.	ELAST W3	.34086	.31415

Sources: Tables B-51 and B-52.

TABLE C-40

STATE -- MD

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- ELEMENTARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	682.94000	938.58000
2.	RANGE	1040.40000	1728.70000
3.	RES RANGE	274.93000	428.84000
4.	FED R R	.48470	.57187
5.	REL MN DEV	.13350	.13439
6.	PERM VAR	.93512	.92376
7.	VAR	18921.00000	41890.00000
8.	COEF VAR	.20141	.21804
9.	STD DEV LGS	.16900	.17900
10.	GINI	.09262	.09720
11.	SIM CORR	.56380	.55640
12.	SLOPE W	11.80700	10.68500
13.	SLOPE W2	9.02200	8.41200
14.	SLOPE W3	8.32100	8.55500
15.	EXP DIF	117.24000	192.36000
16.	HICK GINI	.05480	.05571
17.	MEAN W	11.16200	16.83800
18.	STD DEV W	6.56800	10.65900
19.	ELAST W	.19297	.19168
20.	ELAST W2	.14746	.13089
21.	ELAST W3	.13600	.15346

Sources: Tables B-53 and B-54.

TABLE C-41

STATE -- MO

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- ELEMENTARY

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	679.27000	938.21000
2.	RANGE	1040.40000	1728.70000
3.	RES RANGE	320.96000	464.15000
4.	FED R R	.56585	.62356
5.	REL MN DEV	.12992	.13424
6.	PERM VAR	.92456	.90352
7.	VAR	19616.00000	46410.00000
8.	COEF VAR	.20619	.22962
9.	STD DEV LGS	.16987	.18349
10.	GINI	.09043	.09709
11.	SIM CORR	.69650	.71640
12.	SLOPE W	14.84500	12.69600
13.	SLOPE W2	8.46600	9.14300
14.	SLOPE W3	7.53900	9.18400
15.	EXP DIF	123.49000	226.87000
16.	HICK GINI	.06003	.06287
17.	MEAN W	9.56270	14.73200
18.	STD DEV W	6.57140	12.15500
19.	ELAST W	.20899	.20017
20.	ELAST W2	.11918	.14415
21.	ELAST W3	.10613	.14480

Sources: Tables B-53 and B-54.

TABLE C-42

STATE -- N J

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975	1976	1977
1.	MEAN EXP	1412.40000	1514.50000	1703.90000	1872.00000
2.	RANGE	4667.00000	2706.10000	5056.30000	5553.00000
3.	RES RANGE	1021.90000	1057.90000	1058.00000	1209.80000
4.	FED P R	1.04470	1.00830	.85843	.87805
5.	REL MN DEV	.17750	.17323	.15473	.19247
6.	PERM VAR	.85402	.85449	.85808	.84714
7.	VAR	126390.00000	113240.00000	139790.00000	171600.00000
8.	COEF VAR	.25135	.22219	.21943	.22129
9.	STD DEV LGS	.35420	.27050	.13160	.17190
10.	GINI	.12700	.12100	.11000	.11100
11.	SIM CORR	.40580	.37040	.32060	.38670
12.	SLOPE W	2.18170	1.63690	1.34110	1.63790
13.	SLOPE W2	3.97200	3.50760	2.77900	3.49280
14.	SLOPE W3	4.28010	4.09720	3.19430	3.81790
15.	EXP DIF	566.02000	623.91000	571.05000	746.75000
16.	HICK GINI	.06700	.06300	.04900	.05500
17.	MEAN W	76.60400	85.90000	94.93100	104.51000
18.	STD DEV W	66.12300	76.13900	89.38500	97.79700
19.	ELAST W	.11833	.09284	.07472	.07144
20.	ELAST W2	.21543	.19895	.15483	.17276
21.	ELAST W3	.23214	.23239	.17797	.21315

Sources: Tables B-56 through B-59.

TABLE C-43

STATE -- N J

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975	1976	1977
1. MEAN EXP	1400.50000	1511.20000	1667.70000	1823.70000
2. RANGE	4667.00000	2706.10000	5056.30000	5553.00000
3. RES RANGE	819.02000	839.78000	1007.10000	1057.60000
4. FED R R	.78060	.84529	.82836	.78799
5. REL MN DEV	.14621	.14836	.13120	.13678
6. PERM VAR	.87382	.87063	.89139	.87823
7. VAR	70485.00000	83123.00000	80367.00000	117940.00000
8. COEF VAR	.18957	.19078	.16999	.18831
9. STD DEV LGS	.28650	.23190	.10490	.16720
10. GINI	.10400	.10300	.09300	.07900
11. SIM CORR	.38960	.41420	.46250	.42950
12. SLOPE W	3.08190	3.14490	3.10550	3.12820
13. SLOPE W2	3.87150	4.12890	4.12060	4.07220
14. SLOPE W3	3.88150	4.18380	4.27800	4.14760
15. EXP DIF	260.52000	317.71000	361.25000	391.08000
16. HICK GINI	0.00000	.05000	.05100	.04900
17. MEAN W	60.47000	66.85300	72.68600	79.26600
18. STD DEV W	33.56100	37.97000	42.22200	47.14500
19. ELAST W	.13307	.13913	.13538	.13597
20. ELAST W2	.16716	.18266	.17958	.17700
21. ELAST W3	.16759	.18508	.18645	.18027

Sources: Tables B-56 through B-59.

TABLE C-44

STATE -- N M

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1973	1974	1975
1.	MEAN EXP	948.09000	1067.80000	1230.00000	1358.40000
2.	RANGE	968.66000	2761.80000	1922.10000	1554.80000
3.	RES RANGE	684.85000	979.60000	1205.30000	1094.40000
4.	FED R R	.96620	1.27440	1.42490	1.10420
5.	REL MN DEV	.19507	.25768	.25744	.22618
6.	PERM VAR	.88711	.85849	.87254	.90886
7.	VAR	54820.00000	147950.00000	160760.00000	154270.00000
8.	COEF VAR	.24696	.36021	.32599	.27578
9.	STD DEV LGS	.22500	.27700	.28900	.25100
10.	GINI	.13035	.16048	.16842	.14511
11.	SIM CORR	.49993	.32739	.34503	.26419
12.	SLOPE W	2.07610	1.95010	1.73250	1.08010
13.	SLOPE W2	2.81300	2.84730	2.78940	1.88680
14.	SLOPE W3	2.93590	2.98130	3.07780	2.34450
15.	EXP DIF	345.31000	407.22000	558.77000	469.35000
16.	MICK GINI	0.00000	0.00000	0.00000	0.00000
17.	MEAN W	68.31800	76.21200	86.95700	94.91600
18.	STD DEV W	56.38300	64.57400	79.85200	89.62400
19.	ELAST W	.14960	.13918	.12248	.07660
20.	ELAST W2	.20270	.20522	.19720	.13381
21.	ELAST W3	.21156	.21278	.21759	.16625

Sources: Tables B-60 through B-63.

TABLE C-45

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STATE -- N M

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1


    MEASURES OF MEAN,
    EQUALITY, AND
    FISCAL NEUTRALITY                 1972           1973           1974           1975
-----------------------------------------------------------------------------------------

 1.  MEAN EXP                     781.38000      839.60000      947.99000     1069.50000
 2.  RANGE                        968.66000     2761.80000     1922.10000     1554.80000
 3.  RES RANGE                    286.48000      365.61000      356.38000      353.12000
 4.  FED R R                         .41070         .49730         .42930         .37230
 5.  REL MN DEV                      .10599         .10974         .09324         .07592
 6.  PERM VAR                        .99522         .97606         .94382         .96132
 7.  VAR                        14208.00000    22733.00000    25491.00000    21467.00000
 8.  COEF VAR                        .15255         .17958         .16842         .13699
 9.  STD DEV LGS                     .13200         .14000         .13300         .11300
10.  GINI                            .06804         .06968         .06447         .05236
11.  SIM CORR                        .48140         .36344         .49183         .37259
12.  SLOPE W                        1.78890        1.51110        1.67990        1.02680
13.  SLOPE W2                       1.36960         .71979        1.46720         .77756
14.  SLOPE W3                        .06527        -.11484        1.06230         .54014
15.  EXP DIF                       36.80400      -13.80400       95.46200       57.43300
16.  HICK GINI                       .00046        0.00000        0.00000        0.00000
17.  MEAN W                        46.36000       51.26800       57.30900       64.11600
18.  STD DEV W                     32.07600       36.26300       46.74400       53.16500
19.  ELAST W                         .10614         .09227         .10156         .06156
20.  ELAST W2                        .08126         .04395         .08870         .04661
21.  ELAST W3                        .00387        -.00701         .06422         .03238
```

Sources: Tables B-60 through B-63.

TABLE C-46

STATE -- N C

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	629.00000	884.00000
2.	RANGE	300.00000	444.00000
3.	RES RANGE	201.00000	251.00000
4.	FED R R	.36873	.32241
5.	REL MN DEV	.07103	.06779
6.	PERM VAR	.92112	.93270
7.	VAR	3377.00000	6185.00000
8.	COEF VAR	.09237	.08897
9.	STD DEV LGS	.08996	.08838
10.	GINI	.05076	.04846
11.	SIM CORR	.54948	.27173
12.	SLOPE W	3.12150	.50004
13.	SLOPE W2	2.45230	.86756
14.	SLOPE W3	1.60200	.85692
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	32.69600	81.59300
18.	STD DEV W	10.26900	42.88400
19.	ELAST W	.16225	.04615
20.	ELAST W2	.12747	.08008
21.	ELAST W3	.08327	.07909

Sources: Tables B-65 and B-66.

TABLE C-47

STATE -- N C

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	639.00000	900.00000
2.	RANGE	300.00000	444.00000
3.	RES RANGE	274.00000	340.00000
4.	FED R R	.51269	.42951
5.	REL MN DEV	.09271	.08370
6.	PERM VAR	.93279	.95092
7.	VAR	5672.00000	9383.00000
8.	COEF VAR	.11987	.10758
9.	STD DEV LGS	.11575	.10298
10.	GINI	.06552	.05792
11.	SIM CORR	.75750	.44016
12.	SLOPE W	5.02520	1.08430
13.	SLOPE W2	4.22890	1.69140
14.	SLOPE W3	3.76650	1.67580
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	36.28400	56.17400
18.	STD DEV W	10.26100	57.78700
19.	ELAST W	.28534	.10382
20.	ELAST W2	.24013	.16195
21.	ELAST W3	.21387	.16046

Sources: Tables B-65 and B-66.

TABLE C-48

STATE -- S C

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	491.00000	794.00000
2.	RANGE	372.00000	1057.00000
3.	RES RANGE	268.00000	610.00000
4.	FED R R	.74071	1.06440
5.	REL MN DEV	.11560	.17374
6.	PERM VAR	.85848	.83029
7.	VAR	5416.00000	35864.00000
8.	COEF VAR	.14980	.23848
9.	STD DEV LGS	.14813	.21996
10.	GINI	.08304	.12021
11.	SIM CORR	.63060	.38614
12.	SLOPE W	45.70100	70.51200
13.	SLOPE W2	61.36600	98.43700
14.	SLOPE W3	60.96400	101.72000
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	2.25700	2.75300
18.	STD DEV W	1.02100	1.04300
19.	ELAST W	.21008	.24448
20.	ELAST W2	.28208	.34131
21.	ELAST W3	.28024	.35269

Sources: Tables B-68 and B-69.

TABLE C-49

STATE -- SC

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1972	1975
1.	MEAN EXP	507.00000	805.00000
2.	RANGE	372.00000	1157.00000
3.	RES RANGE	296.00000	604.00000
4.	FED R R	.80706	1.04910
5.	REL MN DEV	.11678	.15990
6.	PERM VAR	.90450	.86841
7.	VAR	6003.00000	28259.00000
8.	COEF VAR	.15284	.20878
9.	STD DEV LGS	.15266	.19943
10.	GINI	.08474	.11522
11.	SIM CORR	.75655	.55199
12.	SLOPE W	80.15700	96.30500
13.	SLOPE W2	91.57900	110.06000
14.	SLOPE W3	93.06900	111.01000
15.	EXP DIF	0.00000	0.00000
16.	HICK GINI	0.00000	0.00000
17.	MEAN W	2.37900	3.04800
18.	STD DEV W	.87400	1.08400
19.	ELAST W	.37612	.36464
20.	ELAST W2	.42972	.41672
21.	ELAST W3	.43671	.42032

Sources: Tables B-68 and B-69.

TABLE C-50

STATE -- S D

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1973	1974	1975
1.	MEAN EXP	878.30000	969.69000	1081.50000
2.	RANGE	1934.90000	1612.60000	1695.20000
3.	RES RANGE	581.47000	707.67000	709.56000
4.	FED R Q	.90083	.99780	.88459
5.	REL MN DEV	.16687	.16676	.15883
6.	PERM VAR	.90123	.89188	.88420
7.	VAR	46568.00000	53973.00000	58148.00000
8.	COEF VAR	.24570	.23958	.22290
9.	STD DEV LGS	.23500	.23200	.21600
10.	GINI	.12225	.12177	.11552
11.	SIM CORR	.84080	.81140	.79490
12.	SLOPE W	13.03500	13.21800	12.68300
13.	SLOPE W2	13.83300	13.59700	12.92700
14.	SLOPE W3	14.59600	13.17500	11.33600
15.	EXP DIF	411.75000	387.38000	349.55000
16.	HICK GINI	.09787	.09631	.08707
17.	MEAN W	27.92700	30.38900	32.62800
18.	STD DEV W	13.92000	14.26100	15.11300
19.	ELAST W	.41447	.41424	.38264
20.	ELAST W2	.43984	.42611	.39000
21.	ELAST W3	.46410	.41289	.34200

Sources: Tables B-70 through B-72.

TABLE C-51

STATE -- S D

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 3

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1973	1974	1975
1.	MEAN EXP	765.96000	854.55000	967.93000
2.	RANGE	1934.90000	1612.60000	1695.20000
3.	RES RANGE	406.22000	441.32000	584.73000
4.	FED R R	.67114	.64959	.87952
5.	REL MN DEV	.12899	.12724	.11365
6.	PERM VAR	.86903	.87509	.87444
7.	VAR	22750.00000	29106.00000	29894.00000
8.	COEF VAR	.19692	.19964	.17863
9.	STD DEV LGS	.21307	.21408	.19087
10.	GINI	.09643	.09810	.08762
11.	SIM CORR	.81530	.79670	.75930
12.	SLOPE W	12.99600	12.40800	11.68600
13.	SLOPE W2	14.48100	13.74000	12.61900
14.	SLOPE W3	14.16500	13.42300	12.15800
15.	EXP DIF	271.44000	307.18000	284.53000
16.	HICK GINI	.08063	.08172	.06753
17.	MEAN W	20.73500	21.92600	24.11800
18.	STD DEV W	9.46190	10.95300	11.23500
19.	ELAST W	.35181	.31836	.29118
20.	ELAST W2	.39201	.35254	.31443
21.	ELAST W3	.38346	.34441	.30294

Sources: Tables B-70 through B-72.

TABLE C-52

STATE -- TEXAS

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	1255.40000	1510.40000
2.	RANGE	25164.00000	67188.00000
3.	RES RANGE	1530.50000	1747.10000
4.	FED R R	2.17390	1.97270
5.	REL MN DEV	.34930	.35552
6.	PERM VAR	.82835	.84949
7.	VAR	1245400.00000	4681800.00000
8.	COEF VAR	.88896	1.43260
9.	STD DEV LGS	.39200	.37700
10.	GINI	.24476	.24616
11.	SIM CORR	.72107	.66848
12.	SLOPE W	.87748	1.57760
13.	SLOPE W2	1.40560	1.06900
14.	SLOPE W3	.81491	.79846
15.	EXP DIF	1478.80000	1464.10000
16.	HICK GINI	.00510	.00049
17.	MEAN W	275.07000	275.07000
18.	STD DEV W	916.82000	916.82000
19.	ELAST W	.19226	.28731
20.	ELAST W2	.30798	.19468
21.	ELAST W3	.17855	.14541

Sources: Tables B-73 and B-74.

TABLE C-53

STATE -- TEXAS

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1974	1975
1.	MEAN EXP	1029.50000	1232.30000
2.	RANGE	25164.00000	67186.00000
3.	RES RANGE	750.58000	776.15000
4.	FED R R	1.11200	.88760
5.	REL MN DEV	.16089	.14028
6.	PERM VAR	.83930	.88372
7.	VAR	63494.00000	76544.00000
8.	COEF VAR	.24476	.22451
9.	STD DEV LGS	.22600	.18900
10.	GINI	.12099	.10595
11.	SIM CORR	.60420	.62227
12.	SLOPE W	1.48970	1.72000
13.	SLOPE W2	1.79540	1.85100
14.	SLOPE W3	2.05500	2.28780
15.	EXP DIF	418.82000	455.86000
16.	HICK GINI	.01880	.01883
17.	MEAN W	93.41400	93.52700
18.	STD DEV W	101.89000	99.61300
19.	ELAST W	.13517	.13054
20.	ELAST W2	.15837	.14048
21.	ELAST W3	.18647	.17364

Sources: Tables B-73 and B-74.

TABLE C-54

STATE -- WASH

UNIT OF ANALYSIS -- DISTRICT

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1974
1.	MEAN EXP	813.79000	1143.30000
2.	RANGE	4549.50000	[illegible]606.80000
3.	RES RANGE	780.44000	1303.20000
4.	FED R R	1.45120	1.97020
5.	REL MN DEV	.25257	.27667
6.	PERM VAR	.87559	.84519
7.	VAR	131850.00000	294610.00000
8.	COEF VAR	.44620	.47474
9.	STD DEV LGS	.31000	.35600
10.	GINI	.17821	.20029
11.	SIM CORR	.70000	.60610
12.	SLOPE W	1.92600	2.15600
13.	SLOPE W2	1.45500	4.27600
14.	SLOPE W3	1.75700	3.36800
15.	EXP DIF	463.57000	1027.80000
16.	HICK GINI	.11836	.13708
17.	MEAN W	110.43000	112.51000
18.	STD DEV W	131.95000	152.58000
19.	ELAST W	.26136	.21217
20.	ELAST W2	.19744	.42079
21.	ELAST W3	.23842	.33144

Sources: Tables B-76 and B-77.

TABLE C-55

STATE -- WASH

UNIT OF ANALYSIS -- UNWGT PUPIL

DISTRICT TYPE -- 1

	MEASURES OF MEAN, EQUALITY, AND FISCAL NEUTRALITY	1970	1974
1.	MEAN EXP	792.18000	1087.70000
2.	RANGE	4549.50000	5606.80000
3.	RES RANGE	482.04000	791.74000
4.	FED R R	.81917	1.10110
5.	REL MN DEV	.15951	.15866
6.	PERM VAR	.86388	.81532
7.	VAR	23819.00000	51640.00000
8.	COEF VAR	.19482	.20892
9.	STD DEV LGS	.19203	.21428
10.	GINI	.10884	.11515
11.	SIM CORR	.54510	.52530
12.	SLOPE W	2.20000	3.46600
13.	SLOPE W2	2.75300	4.06700
14.	SLOPE W3	3.12900	4.75900
15.	EXP DIF	239.29000	327.75000
16.	HICK GINI	.06389	.06755
17.	MEAN W	58.38800	62.49100
18.	STD DEV W	38.24200	34.43400
19.	ELAST W	.16215	.19913
20.	ELAST W2	.20291	.23366
21.	ELAST W3	.23062	.27342

Sources: Tables B-76 and B-77.